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ORIGINAL ESSAYS AND CASES.

ART. I.—*A History of the Autumnal Fever of the year* 1822; *as it appeared in Wilson County, Tennessee, in a letter from* DR. SAMUEL HOGG, *to* DR. SAMUEL BROWN. *Communicated by Dr. Brown.*

LEBANON, (TENN.) 20th Nov. 1822.

DEAR SIR—Your very polite letter of the 10th inst. has been received, in which you request my opinion respecting the causes and treatment of the Epidemic that prevailed through our country during the past summer and fall; I will give it to you in the best manner that my penury of language, and want of general science, will enable me.

A short view of the medical Typography of the county, the previous state of the weather, and the habits of the people, may, perhaps, enable you, more fully, to comprehend my observations on the epidemic.

Wilson county contains an area of twenty-five miles square, is bounded on the north by Cumberland river, and intersected by twelve or fifteen small streams at nearly equal distances from each other, running nearly a N. course on the one hand into the Cumberland, and from S. to S. W. on the other hand, into Stone's river. The S. S. E. and S. W. sections of the county, after leaving the river 10 or 12 miles, become hilly,

or what we call very broken, terminating in an extensive ridge separating the small N. and S. streams which I have mentioned.

In common seasons the small streams or creeks, from the last of July, until the middle of November, become almost dry or stagnant, in consequence of which, the deposites from the previous floods are exposed to the sun during the hot weather. The soil on the high ground is rich and productive, wherever the rock does not project. The forest is luxuriant, and consists of beech, shell-bark hickory, elm, sugar maple, walnut, and wild cherry; or of white, red, and Spanish oak, poplar, hickory, dogwood, mulberry, &c.; the undergrowth of paw-paw, spicewood, sassafras, and grape vines. The flat lands, which are not very fertile, are covered with oak, hickory, elm, ash, dogwood, and cedar, with much grass and weeds.

The winter of 1821 and 1822, was more severe than usual, generating much snow and ice, and of course not remarkable for rain. It was very unfavourable to females during the puerperal state. The spring was quite seasonable, except the month of April, which was rather wet; June was very warm and wet, until the 15th or 16th, after which it became dry and hot throughout. July was excessively warm, and so wet that most of the late crops were injured either before or at the time of harvest. It was generally remarked, that rain had less influence in cooling the air, than in previous seasons. August and September, although moderately wet, were extremely warm; also October, with the exception of a few days, from the 15th to the 20th. The small streams continued to run during the whole season.

The aggregate population of the district I have described, in 1820 exceeded fifteen thousand. The inhabitants are nearly upon an equality, in property and mental improvement; not possessing a great deal of wealth, but, with a few exceptions, being good livers, though not very intemperate. In general, they are hearty eaters of animal food.

The diseases of the season were of the ordinary type—mild remittents, yielding readily to our moderate venesection, followed by evacuants and antimonials, until about 15th June. There were, then, a few anomalous cases, which induced me

to expect a severe autumnal fever. In these patients the symptoms were, a slight chill, followed by partial excitement, severe gastric irritation, torpor of the bowels, and other affections, indicating a very "unequal distribution of excitability, destruction of the balance of circulation," and derangement of all the regular and healthy sympathies of the most important parts. One or two of those patients were carried off by inflammation of stomach and bowels, after which it became more healthy. The disease did not appear in its proper form until about the 10th of July—it arrived at its achme about the 1st of September, prevailed, generally, on the high grounds, (there being but few cases in the section of country where fever prevails in ordinary dry seasons,) and had no respect for age or sex.

Children were much troubled with cholera, frequently terminating in symptomatic Hydrocephalus, when not early arrested; but by yielding readily to emetics, calomel, as an evacuant and alterative, blisters, warm bath, flannel rollers, alkalies, (of which common ley was most frequently used) a regulated diet and exercise.

The premonitory symptoms in this epidemic, when noticed by the patient, were some want of appetite, slight neausea, thirst, furred tongue, and a bad taste in the morning; irregular bowels, disturbed sleep, with occasional heart-burn, and an indisposition to labour and exercise. The exciting causes were either excessive fatigue, over eating, particularly of the fruits of the season, drinking spirits or cider, and other general exciting causes of disease.

The disease commenced, in most cases, with a chill or stretching pains in the extremities, and sometimes a soreness of all the muscles. The reaction was but partially evolved, and terminated in a cold, clammy sweat for the most part, confined to the head and extremities. This was followed by such abatement of the symptoms, as to induce the patient to hope, that it was nothing more than *ague and fever;* and he would not be convinced of his error, until it was frequently too late; for the disease, assuming the form of a *semitertian* until the third or fourth paroxysm; instead, then, of going off with perspiration, as usual, the action would become generally evol-

ved, with increased heat, pain more or less severe in the head, back, and limbs; a white or yellow furred tongue, thirst, nausea, and moderate looseness of the bowels, with bilious or green mucous discharges. There was not much tenseness or soreness of the abdomen, but, sometimes a pain was felt about the region of the liver. The skin was sometimes a little yellow. In general there was sufficient abatement of the symptoms, from 1 to 7 o'clock in the morning, to allow the patient one or two hours sleep. In other cases, (instead of the general action spoken of above) after the third, and more frequently the first or second chill, or shuddering, all the functions appeared extremely oppressed; there was a great indisposition to muscular action, except irregular tossings of the arms and legs; the skin was cool, particularly on the extremities, and somewhat livid, partial sweats about the head and face broke out; and the breathing became laborious, with occasional heavy sighs. Stomach was much oppressed, with severe burning heat, hickup, nausea, and vomiting of a thick, glairy fluid, or green acid, but rarely a yellow bilious matter. The bowels were either obstinately costive, or loose with watery *fœtid* stools with white *flocculi* in them, or bloody mucus with other strong dysenteric marks. In these cases the soreness of the abdomen was sometimes so great, as to forbid motion.

The tongue was either clean and moist; smooth and dry in the middle, but moist on the sides, with a white or yellow fur, sometimes moist, livid, swelled, and covered with a *blue* or *dirty* fur, becoming much thicker towards the root; dry and yellow, dark, almost resembling a narrow wedge in figure, with the papillæ very rough and prominent. There was excessive thirst or none at all. There was a prevailing desire for acids, fruits, melons, &c. which were inadmissible, except in the most open forms of the disease, unattended with much derangement of the functions of the stomach.

Nothing peculiar in the appearance of the eye presented itself, except when the brain was *much* involved; (which happened in but few cases) the pupil was then generally dilated, with a very clear glassy appearance of the cornea.

The urine was very high coloured, without sediments.

Sometimes there was no discharge for twelve or eighteen hours before death, at others it was profuse and transparent. It was generally copious, with a plentiful sediment when a crisis was approaching.

When the proper remedies were used early, the disease generally assumed an open aspect, and readily yielded; but most frequently it was either neglected, or so treated as to assume the worst possible form before the physician was called in. Upon the decline of the disease among those who lived on the high lands, there occurred a number of cases of tertians, quotidians, and a few remittents, (assuming the continued form with considerable disturbance of the brain) similar to those which prevail in common seasons on the low flat lands. They yielded, in most cases, to emetics, cathartics, and the bark, of which I have used more, than during any four seasons since the fall of 1808. I always premising bleeding where there appeared evidence of any local congestion.

The treatment of the milder form of fever having been spoken of, I shall not trouble you farther with it. In the more malignant form, where the case was open, and the action generally diffused, after premising venesection, and making it sufficiently copious to cause a *strong* and *sensible* impression on the system, which in most cases, required the loss of sixteen or twenty ounces, and sometimes a repetition, my first object was, to remove the accumulations of the alimentary canal, (generally considerable in the great arch of the colon) as soon as possible; viewing them as the cause of the great irritability of the stomach. For the purpose of doing this, I used either jalep, calomel, or ol. recine, in such quantities, and as often, as the stomach would bear them; the patient taking as little drink as possible; (and that composed of weak ley, lime water, or elm mucilage) until an operation was produced; to effect which sometimes required the aid of strong cathartic injections. I then used a powder or pill composed of calomel from 4 to 6 grs. ipecac from 1 to 2 grs. with or without nitrate of potash from 8 to 16 grs. (as the state of the stomach and action indicated) repeated every third or fourth hour, assisting its operation, if necessary, with castor oil, until the discharges changed

from the dark and fœtid character, to that of a green and yellow, or were a little mixed with blood, without fœtor, and the bowels without pain. A blister was generally applied to the region of the stomach or liver, and the remedies continued every 5th or 6th hour, until the specific effects of the mercury on the glandular system made their appearance. I then conceived my patient out of danger; nevertheless, in some cases, after this course the stomach would remain somewhat oppressed, the appetite not return, and a degree of pain would arise every evening, with an irregular state of the bowels. These symptoms, apparently arising from a wrong action of the liver, generally yielded to an emetic of ipecac and tartarized antimony, mild sudorifics and time. In some cases in which heat and action of the capillaries were much increased, I found the cold shower bath, or wet cloths to the trunk of the body, of great service. Where there was much concentrated burning and heat in the stomach and bowels, frequent injections of cold water did good.

In the cases where the system seemed much oppressed, or unequal to the production of general reaction, yet, showing tolerably strong efforts, as evinced by the *irregular* exertion of the heart, the carotids and the descending aorta; bleeding was a remedy in which I had great confidence, if used in small quantities, and frequently repeated: and I can with truth declare, that when I saw the patient *early*, and was able to remain with him, I was seldom disappointed in my anticipation of its good effects; it removed the burden from the important parts of the system—equalized the circulation, and regulated the excitability. This brought the disease to its open state, of the treatment of which I have spoken. But when the system had become completely within the range of *indirect* debility, the gastric symptoms very distressing, and hope almost at an end, I think I have seen more benefit from a pill composed of from 10 to 20 grs. calomel, and 1 to 2 grs. of opium, with or without 3 to 4 grs. of volatile alkali, repeated every second hour, until evacuations were either procured, or the irritability of the stomach was sufficiently allayed to receive castor oil, or calcined magnesia, than from any other plan. Blisters to the stomach were always of service; and sinapisms to the feet, and

blisters to the extremities appeared sometimes to do good. Some patients recovered under this plan after they were given over for lost. In these cases the specific effects of the mercury was never fairly evolved until some days after the use of it was discontinued, and gentle cathartics used as freely as the system would bear in the day, with opiates at night. A peculiar livid redness of the tongue, a dark covering over the whole roof of the mouth, and sourness of the breath, indicated an irritative action of the mercury, and required it to be laid aside. Emetics or antimonials frequently appeared to do harm in the early stage of the disease, and seemed to change the open into the congestive state. In the most violent forms, the discharges from the bowels were sometimes a very light colored mucous in the commencement. The excessive watery discharges were sometimes mistaken, both by physicians and friends, for the effects of the antimonials, and the patient lost from congestion, before the error was discovered. Three or four of these patients, I am confident, were snatched from the grave, by the timely administration of calomel and ipecac, or calomel and opium, as above stated; with the occasional use of the saline or oily purgatives, after the morbid action of the secerning vessels had been overcome. From twenty-four to thirty-six hours were frequently necessary to produce free evacuations after the excessive morbid looseness with watery discharges had ceased. I never met with a disease in which the prognosis was so difficult.

Purging or sweating more frequently accompanied the crisis, than a free or open ptyalysm. A moderately yellow color of skin, in the most violent forms, generally indicated a favorable change.

Relapses were frequent, when the disease generally assumed the form of a mild intermittent or remittent.

I have thus given you such an account of the phenomena and treatment of the fever of the present autumn, as my engagements, and the short time allowed me for a reply, have permitted. I am sensible of its imperfections, which, I hope, you will excuse, while I subscribe myself,

Most respectfully, your obedient serv't. Sam'l. Hogg.

To Dr. Brown.

ART. II.—*An Account of the Bilious Fever of* 1822, *as it appeared in Barren County, Kentucky, in a letter from* HENRY MILLER, M. D. *to* SAMUEL BROWN, M. D.—*Communicated by Dr. Brown.*

GLASGOW, KENTUCKY, OCT. 1822.

DEAR SIR—

I have drawn up and shall send you a hasty outline, (imperfect as it must be,) of my practical observations on the fever which prevailed during the last summer and autumn. I am not conscious, in doing this, that I shall add any thing of importance to our present stock of information; but although my observations may have no legitimate claims to originality, they, peradventure, may confirm or corroborate some fluctuating opinions and practice.

It is customary with writers who detail the origin, progress, symptoms, and treatment of an epidemic, to commence its history with some account of the diseases which preceded it, the temperature of the air, the prevailing winds, the moisture or aridity of the atmosphere, &c. Says Dr. Jackson, "the importance of correct meteorological observations, in enabling us to appreciate all the causes of diseases, cannot be denied; and it may be affirmed, without fear of contradiction, that any one who fails to avail himself of their aid, can be but little relied on, when investigating the causes and nature of disease." The illustrious sage of Cos, was particularly minute and successful in his inquiries on this subject. He observed the connection between peculiar diseases and peculiar constitutions of the atmosphere, and the *mutations** of the seasons; and the results of his observations are communicated to us in series of invaluable aphorisms. There can be no doubt but many, very many, of our diseases are to be ascribed to the *sensible* qualities of the atmosphere; and, although I would not deny the existence of an invisible, subtle, and intangible effluvium, which we denominate "miasma," I am disposed to curtail the sphere of

*"Mutationes anni temporum maxime pariunt morbos." *Hippocratis Aphorismi. Sec.* 3.

its morbid operations; inasmuch as intermitting and remitting fevers sometimes prevail in districts where there is an almost total absence of the sources which are said to furnish it. To the production of fevers, which have the superaddition of peculiar, specific, and characteristic phenomena, it may be allowed us to say, that the operation of a peculiar and specific cause is necessary, and this cause may be suspended in the atmosphere. But I am inclined to believe that all the phenomena which occur in our epidemic bilious fevers, might be referred to local morbid impressions, produced by sudden variations in the *sensible* qualities of the air, especially its temperature. These variations act primarily on the cutaneous system, and from this surface, as from *punctum saliens*, irradiate the successive links of that chain of phenomena, which constitute fever, through the mediation of the cutaneo—hepatic sympathy, so happily elucidated by Dr. Johnson, in his work on tropical climates. If this view of the origin of bilious fever be correct, the utility of thermometrical observations, conducted with accuracy, fidelity and judgment, will be obvious. My observations of this kind have been as yet too limited and imperfect, to be productive of much benefit, but a few general remarks on the character of the season, will constitute an appropriate introduction.

The 30th of June is remembered, as the day on which we witnessed a severe thunder storm, of several hours duration, accompanied with the fall of prodigious torrents of rain, insomuch that the houses were damp for several days. The whole of July was unusually wet, though alternately clear and cloudy. It was sultry and oppressive. The mercury in Fahrenheit's thermometer fluctuated between 78° and 89°. On the 28th it stood at 81°, on the 29th at 83°, the 30th at 86°, the 31st 89°. Although we had several sprinkles of rain in August, and some light showers, the latter part of the month, was, upon the whole, as dry and boreal as July had been moist and sultry. The first of August was more oppressive than the last of July, mercury at 92° The 2d, 3d, and 4th, were more agreeable and pleasant, with the circulation of fine breezes. On the 4th the mercury at 84°; but from the 5th to the 8th, and from the

17th to the 25th, cool nights and mornings were experienced; so cool, indeed, as to render fires agreeable; while the meridian sun was not unfrequently oppressive. After the 1st, the mercury, examined at 3 o'clock, P. M., in the shade, fluctuated between 77° and 88°, falling in the night and morning as low as 70°. The early part of September was rather cool and dry. On the 3d, mercury 66°, and on the 4th, 64°. But on the 10th, mercury 78°, and a little sultry; rain on the 12th. From the 13th to the 18th, thunder—several showers—damp—mercury variable. From the 18th, to the termination of the month, clear, pleasant weather, though sometimes cool; for on the 28th the mercury stood at 62°.

From this summary account of the weather during the months of July, August, and September, it appears that the only circumstance worthy of observation, (and indeed it is impossible we should not have attended to it,) was the Proteus-like variableness of our climate,—the sudden transitions from heat to cold, from aridity to moisture, from freshness to sultryness; which might, perhaps, be regarded as adequate to the production of an epidemic bilious fever, such as we have had, without the assistance of miasma, or any deleterious emanation from the bowels of the earth, as suggested by Sydenham and others. If we attend to the anatomy and physiology of the human body, and to the effects produced on our systems by such remarkable vicissitudes, we can account plausibly for fever, without recurring to ideas, the offspring of superstition, such as the "*Divine principle*" of the ancients, or the "*semina-rium e cœlo dimisssum*" of Diemerbroeck.

The bilious fever began to prevail in July, after having been preceded by diarrhœa and dysentery. The fever continued to increase in frequency and obstinacy, and was disposed to assume an intermitting type, of the tertian character; or at least, if a paroxysm appeared every day, those on the odd days were severer and of longer duration.

The county of Barren, previous to the summer and autumn of 1821, presented very few sporadic cases of intermitting fever, and these occurred in the vicinity of mill-ponds, stagnant waters, &c.; but during that season no less than twenty

or thirty cases of pure intermitting fever came under the care of our physicians. I am wholly at a loss to what cause to ascribe this multiplication of this form of fever; but whatever it may be, whether the increase of stagnant collections of water in our barrens, or some occult quality of the atmosphere, it has no doubt extended its influence to the present season.

It is not my design particularly to detail all the symptoms by which this fever, in common with all fevers, was preceded and accompanied; nor to state the minutiæ of practice, established upon permanent principles, and confirmed by the concurrent testimony of every writer; I shall only advert to a few of its most prominent and interesting characteristics.

Not a little diversity of opinion was entertained by the practitioners of the adjacent counties, concerning the nature of the prevailing fever; some contending for its sthenic and inflammatory character, and others strenuously advocating the doctrines of typhus. I was informed, indeed, that a physician of respectability in an adjoining county, believed the fever to be a complication of synochus, synocha and typhus, and that in his practice, in conformity with this hypothesis, he blended in the same formula, and administered in the same dose, remedies for these several forms of fever!!

From my own observations I have no hesitation in declaring, the fever to have been one of sthenic excitement; and accompanied, of course, with local inflammations, when local determinations were not counteracted by the early, active and decisive use of the lancet. The affection of the hepatic system was, in every instance, a circumstance too evident to escape attention. The eyes were generally suffused, and exhibited a yellowish tinge; in addition to which, I may remark, that in one case (that of Mr. Logan) the whole surface of the body, even on the first day of his indisposition, and before his confinement, was of a deep saffron colour. I suspect that the delusion of those, who applied the epithet typhus to this fever, was occasioned by that state of prostration and oppression, which sometimes occurred at a very early period, and was long since clearly distinguished from real debility, by the learned and ingenious Dr. Rush. Indeed so violent was the attack, in

some instances, that there seemed to be a total destruction of the equilibrium of excitability and circulation: insomuch that while the head was evidently the centre of fluxion, was preternaturally warm and painful, and perhaps delirium existed; the extremities, and sometimes the whole body, were cold, and the pulse feeble and intermitting, or slow, tense and full.

In such cases, and indeed in every case, where the pulse and other circumstances authorize it, the lancet was the anchor of hope, the ark of safety, the "magnum," nay, maximum "Dei donum."

The practitioner should not be deterred from copious and decisive venesections, as its judicious employment will restore the natural temperature to the head, tranquility to the mind, and warmth to the extremities. The equilibrium of excitement thus restored I found to be most certainly preserved, by extensive vesication, and subjecting the system to the influence of mercury. I attended a case of fever in a young lady, sixteen years old, in which the skin never was much above, and generally *below*, the natural temperature. She had incessant vomiting, and pain in the head, for the two first days; the pain in the head and vomiting alternately, so that when the sickness of stomach was most distressing, the head was easy, and vice versa. The pulse was, from the commencement, below the healthy standard, and intermitted, every third pulsation, bowels constipated, tongue at first natural, skin cool. I immediately tied up the arm, and drew at least twenty ounces of blood, which exhibited nothing unnatural in its appearance. I then attempted to allay the sickness and vomiting, and to excite the peristaltic action of the bowels, by effervescing draughts, anodynes, blistering the epigastrium, calomel pills, injections, &c. but with no very decided advantage; the nausea and vomiting still continued, and the bowels were imperfectly moved. On the evening of the second day of her attack, every symptom became more alarming. Her paroxysms of retching and vomiting were now more frequent, and of longer duration; and in the intervals, there was something indescribably unfavourable in the appearance of her countenance; together with constant yawning, and frequent and deeply protracted inspirations.

Recollecting the remark of Sydenham, that in the plague of London, nothing proved effectual in composing the irritation of the stomach, but perspiration, produced by completely enveloping the patient in his bed-clothes; and having in vain essayed all the usual antiemetic prescriptions, I now determined to excite the action of the cutaneous capillaries, by the agency of vapour, arising from warm bricks, wrapped in flannel, and placed under the blankets, one in each axilla, one in contact with each thigh, and one to the soles of the feet. The result exceeded my most sanguine expectations. As soon as the sweat began to flow, the stomach became composed, and the patient appeared entirely easy. But her disease was not yet subdued; the pulse was still intermitting, and the head evidently affected, as appeared from some derangement of mind, occasional pain, and dilatation of the pupils. Considering these circumstances, I was desirous of abstracting more blood, but was for sometime undecided whether or not to resort to it. I apprehended that if inflammation of the brain did not already exist, it was about to take place; but the pulse being feeble and intermitting, the skin cool, and the debility alarming, I was afraid to bleed. I felt the pulse again and again, and although it was frequent and feeble, I thought I could perceive occasionally a smart, labouring stroke. I decided it to be a pulse of oppression, and not of debility. I drew more blood, notwithstanding I was by no means convinced she would not sink under it. When eight ounces had flown, there appearing some tendency to syncope, the arm was tied up. The disposition to faint continued an hour, but the patient declared herself to be easier, and the pulse was evidently more regular, and somewhat stronger. The blood was covered with an uncommonly thick coat of coagulable lymph. Encouraged by these results nearly twelve ounces more were drawn, on the day following, in a similar state of the system. This blood was likewise sizy. Further repetition of the bleeding was not deemed necessary or prudent. Blisters were applied to the scalp, back of the neck and extremities, profuse ptyalism was effected, as speedily as possible, and the most active purges

administered. In a few days I had the satisfaction to find, that my patient's only complaint was a sore mouth.

It is not my intention to trouble you with a tedious detail of cases, and I was induced to give the preceding somewhat at large, because I conceive it to be interesting in itself, but more especially because it confirms my opinion with regard to the nature of our late epidemic, and establishes the utility of the lancet beyond controversy.

The labarynths of pathology, in our own times, have been illuminated by the torch of physiology, and we may reasonably indulge the hope, that the sufferings incident to humanity will be greatly palliated, by the perfection to which the science of medicine will be advanced, when we contemplate the propitious revolution which has recently been effected, in the opinions of medical practitioners, concerning the remedial application of the lancet. It is not long since venesection was prescribed only in cases where the pulse was full, quick and tense; but our illustrious countryman, Dr. Rush, enumerates no less than eleven different states of the pulse, which require the employment of venesection; and Hippocrates, if restored to life, would not be a little surprised to perceive that an "imperceptible" pulse is one of the conditions, at present regarded as indicative of the necessity of venesection.

Notwithstanding I have witnessed the most beneficial effects from the early and decisive employment of venesection in this fever, candour obliges me to state, that this was, by no means, my exclusive reliance. Cathartics, diaphoretics, epispastics, and mercury, were all actively and extensively used. Indeed, I considered the last, mercury, administered with a view to its cathartic and sialagogue effects, as very little subordinate, in importance, to venesection itself.

Three cases of fever, entrusted to my care, were confided to mercury alone, and my confidence was not misplaced. It is true, in all these cases, the lancet was used once in the commencement of the attack. Sixty grains of sub-mur. hydrargyri, combined with thirty drops of tinct. opii. to restrain its cathartic operation, were administered for a dose. The cases were all of some days standing, and were, I think, nearly as violent

as any I had observed. In twenty-four or thirty-six hours after the exhibition of the calomel, the salivary glands were affected, and after the appearance of ptyalism the patients had no return of fever, but rapidly convalesced. In these cases the mercury seems to have revolutionized and subverted the chain of morbid associations which constitute fever. I must not conceal, however, that one case of fever, in my practice, resisted the combined action of the lancet, mercury, extensive vesication, and active purging. This patient has been indisposed for between two and three months; she has been salivated at least six weeks of that time; and notwithstanding she has been well evacuated, and the whole epigastric and hypochondriac regions have been blistered repeatedly, and every description of antiemetic medicine administered; she is still affected with nausea, and frequent vomiting, the dejections often bilious. Suspecting that the irritability of her stomach was produced by hepatic affection, she has, in addition to the mercury, taken the nitric acid freely, but with no obvious benefit. I have lately prescribed for her, finely pulverized charcoal, which is said to be sometimes singularly efficacious, in allaying morbid, gastric irritability. As the patient lives fifteen miles in the country, I have not yet been informed of the success of this new remedy.

I am disposed to ascribe the obstinacy of this case to the neglect of sufficient evacuations at its commencement. I did not see her until the sixth or seventh day of her indisposition. She had been twice *sparingly* bled. I did not believe a repetition of the venesection necessary, from what circumstances I do not precisely recollect, but, it is more than probable, solely because she had had fever for some days! This was among the first cases of fever that fell to my care, and I then believed, with a majority of my brethren, that bleeding ought to be restricted to the *early* stages of fever.

This is a fatal persuasion when carried into practice, and in order to expose its fallacy, it is only necessary to enquire what are our intentions in resorting to venesection? I can conceive of but two objects which we can possibly have in view: to moderate general increased excitement, or to remove the local inflammations in which it may have terminated. In the former

instance, we apprehend that the continuance of inordinate excitement will exhaust the system, producing indirect debility and death; and that the abstraction of blood, producing debility of the direct kind, so far from exhausting the excitability, by diminishing excitement, prevents its expenditure. Now is not the indirect debility consequent on increased excitement, more to be dreaded in the advanced stages of fever, where the excitability is already considerably exhausted, than in the first stage, where no such deficiency exists? And, of consequence, is not venesection *more* imperatively called for in the advanced stages of fever, whenever increased excitement prevails? Inflammation is certainly more dangerous when occurring in a delicate and exhausted system, and calls equally loud for the lancet. I would not be understood to intimate that bleeding can, with safety and propriety, be pushed to the same extent in the advanced, as in the incipient stage of fever; but I do contend, that in both cases it is *equally* necessary, when demanded by the existence of a sthenic diathesis.

I shall conclude the present communication by adverting to a certain condition of the system, in which venesection cannot be employed with safety, notwithstanding it may be called for by the prevalence of great febrile excitement. I allude to a peculiar nervous irritability of stomach, which disposes that organ to spasmodic affection, during the sickness and tendency to syncope, which bleeding is apt to produce, in females of delicate constitutions, who have been subject to what is ordinarily called, "cramp in the stomach." By inattention to this precaution, I have reason to believe the life of a valuable female was lost. She was attacked with fever, which was nearly subdued by one venesection, an emetic, and a few active cathartics; she was, indeed, pronounced convalescent. But some little febrile excitement again appearing, she became alarmed, and sent for her physician—who, from his devotion to the lancet, had recourse to venesection to moderate a little febrile exacerbation, which might easily have been removed by diaphoretics and refrigerants. The consequence was, that an hour afterwards the system was completely prostrated—the pulse forsook the extremities, and never returned—the

body was covered with a profuse clammy sweat, and in three or four hours she expired, with a spasmodic affection of the stomach and bowels—as was evident from the intumescence and tension of the abdomen, and the great difficulty of respiration of which she complained. These symptoms too she had before experienced in former attacks of spasmodic colic. The stomach, in cases of this kind, becomes affected through the medium of the active sympathy, which exists between that organ and the brain and heart. The syncope produces nausea and vomiting, and the violent retrogade action of the stomach terminates in spasm.

In the desire to comply promptly with your request, I have allowed myself but a day or two to prepare this paper, which is intended to be nothing more than a correct narrative of facts. In sending it to you without delay, I have of course not regarded the admonition of the poet:—

> "Isepe stylum vertas, iterum quæ digna legi
> Sint scripturus; neque, te ut muetur turba
> Labores, contentus paucis Lectoribus."

Your obliged friend and humble servant,

HENRY MILLER.

Samuel Brown, M. D.

SELECTED ESSAY.

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ART. III.—*On the Secale Cornutum, or Ergot.* By W. P. DEWEES, M. D., Adjunct Professor of Midwifery in the University of Pennsylvania.

From the American Journal of the Medical Sciences, No. 2.

THE ergot has obtained throughout this country, as well as in Europe, a reputation as a powerful auxiliary in the practice of midwifery. But great diversity of opinion seems to exist, as to the precise estimation in which the article should be held; its claim being extravagantly urged by some practitioners, while by others it has been condemned as useless, and its employment even deprecated. Under these circumstances, it may be considered as not altogether uninteresting to inquire, what are its real powers; under what circumstances it is useful; and, what are the rules that should be attended to, in order to prevent any evil following its exhibition.

The action of the ergot appears to be specifically upon the uterine fibres: urging them sooner or later to more or less violent contraction. It is not the alternate contraction alone that is increased by this substance; the tonic, which is of much more value, is also powerfully augmented; since it can, in consequence of this power, be most advantageously employed, in many cases where this effect is all important. In this respect it appears different from other stimuli, which may exert an influence upon this organ; such as opium, the oil of cinnamon, volatile alkali, &c.; or the mechanical stimulus of the forceps, vectis, or the hand.*

* I have never witnessed any exaltation of the powers of the arterial system, or any other marked effect, (if we except its specific action,) from the exhibition of the ergot, though I have been very attentive to the subject. But it is declared by Dr. Oslere, on the authority of Dr. Erskine and others, that it slightly increases the fulness and frequency of the pulse; produces a glow over the surface; excites

Each of the stimulants just mentioned, has been known to rouse the alternate contractions of the uterus into a temporary, and sometimes successful action; but after neither does the tonic contraction follow, with any degree of certainty; nay, we may with much truth declare, that inertia of this organ is very apt to follow their employment. Thus we witness hæmorrhage sometimes succeed the use of either of the remedies just named, though successfully exerted as regards the mere delivery. But so far as my own experience goes, or a pretty extensive inquiry will justify the declaration, I can say, that neither myself, nor such of my friends of whom I have asked the question, have ever witnessed such a consequence follow the use of the ergot.

So far then, I think we may with much confidence declare, that every other stimulus which has contributed to the energy of the uterus, except the ergot, has been followed occasionally by inertia of that organ: this fact is of high practical importance, as it leads to an almost certain mode of treating such females as may be habitually liable to floodings after delivery. It also, on the other hand, points out a caution of equal practical importance; namely, not to exhibit it, when there may be a chance that turning may be necessary; but more of this presently.

There is another peculiarity attending the action of this substance, not less remarkable, perhaps, though not equally important; namely, the promptitude of its action; for we have constantly observed, that if it do not manifest an influence in twenty minutes, or half an hour at farthest, it utterly fails. The action of this substance is generally so extremely prompt, as sometimes to create a doubt of its agency in the minds of those unaccustomed to its influence. But I am quite certain, that the ergot never acts with so much efficacy as when it acts quickly; indeed I might say that its success is almost in proportion to its promptitude. By many, this very sudden action of the uterus has been attributed to coincidence, rather than the effect of the

nausea and sometimes vomiting, and pain and giddiness of the head. *Phil. Journal of the Med. and Phys Sciences. No.* 3, *N. S.*

As far as I have been able to determine, the effects of this substance are confined to the nervous system; and through its intervention, acts specifically upon the uterus. Nor are its powers confined to the human uterus; it acts with equal and similar efficacy upon the uterus of the brute. We are told it is familiarly used near Lyons, to aid the paturiant cow.

remedy. This may occasionally be the case, as we see changes similar to those effected by the ergot, take place as suddenly where none has been exhibited; but it would be unfair to declare this to be the case always.

Thus, on the 11th of November, 1827, I was called to Mrs. V. in labour with her fifth child; the waters had discharged themselves half an hour before my arrival, and the patient had experienced a number of very smart pains. After the escape of the liquor amnii, they abated both in force and frequency. On the accession of a pain I examined my patient, and found the presentation to be a first presentation, and the head arrived at the inferior strait; the mouth of the uterus was fully dilated, and every thing gave promise of a speedy delivery. But the pains became still more feeble and longer apart, and after waiting an hour and a half for their amendment, without advantage, I resolved upon exhibiting the ergot; especially as my patient became clamorous for its exhibition. The ergot was accordingly sent for; the messenger had scarcely left the house, before the powers of the uterus were spontaneously roused, and with such efficacy that the child was upon the point of being born, when it arrived; it, was, therefore, not given; ten minutes more were all that were necessary for the completion of the delivery. In this case, had the ergot been given, the alteration in the action of the uterus would doubtless have been attributed to it, by those unacquainted with the peculiarities of its action; yet an experienced eye and ear would readily have detected its want of efficacy, did it exert no power, as well as be able to determine its agency, if it co-operated with the newly awakened powers of the uterus.

As regards myself, I have the most firm reliance upon the powers of the ergot. And, the character of its action is so distinctly marked, that a very little observation will enable us to detect it. Whether or not the peculiarity of the effort produced by the ergot has been observed by others, I cannot say;* it appears to be perfectly well defined and characteristic; so that I think I am always able to distinguish the cases of coincidence, from those in which the ergot was decidedly operating.

* Many speak of its specific action; or of its specific influence, but I do not recollect to have seen any account of the details, in what these specific effects consist.

When ergot has been administered with success, we find the uterine effort not only more quickly repeated, and more powerfully exerted, but these efforts are accompanied with less suffering, than the same apparent exertions of this organ, where not urged by this drug. The woman, when interrogated with respect to her feelings, expresses her sensations by saying she feels "as if every thing was forcing from her;" but at the same time admits, that the pains have not the same character with those she suffered before: indeed it very frequently happens, that there is a great abatement of suffering, by converting a concentrated pain, and this most frequently in the back, to a more generally diffused one over the abdomen; or by obliging the back to participate if the abdomen has been the particular seat of it. At the same time, it must be confessed that the intervals between the contractions are more uncomfortable, as an almost constant nisus is kept up by the excited, or rather, it would seem, the goaded uterus, though the sensation does not amount to pain. Now the presence of the circumstances just noticed, constitute the peculiarity of the action of the secale cornutum.

Some of my medical friends, but they are very few indeed, declare they never have witnessed *any effect whatever from the ergot, even when it has been administered in large doses.** I account for this discrepancy of result, only by supposing the ergot which they employed was effete; a circumstance, I have reason to believe from experience, of no unusual occurrence.

The like want of faith in the powers of this article, seems to prevail with many respectable practitioners in Europe; and which may be accounted for, perhaps on the same principle. Dr. Davis, an accoucher of deserved eminence, says that "the pretensions of the secale cornutum have been generally known to the profession for nearly twenty years; yet the actual fact of its power, has not been satisfactorily established; nor is there evidence of its having, in a single instance, superseded the necessity of using the forceps."† This assertion, it must be observed, is one which admits of no possible demonstration; since it would be impossible to prove, that the

*Chaussier and Madame La Chapelle, also declare they have never witnessed any effects from the ergot, in the trials they made of it, in "La maternite de Paris."

† Elements of Operative Midwifery.

case in which the ergot appeared to be successful, would absolutely have required the use of the forceps, or that the cases relieved by the forceps might not, in many instances, have been successfully treated by the ergot: yet so far, I can safely aver that a number of instances have occurred, in which I believe I should have employed the forceps, previously to my acquaintance with the powers of the ergot, but which were terminated by this drug, both promptly and safely. And further; I am certain that I do not now use the forceps once, where I formerly used them ten times.

And the reason of this abatement in the employment of the forceps, may, I think, be justly attributed to the almost universal use of the ergot, by every kind of practitioner of midwifery; and hence I presume, that the secale cornutum, now achieves deliveries, that would have required the forceps formerly; for were this not the case, I think I should be called upon as formerly, to aid the labour with these instruments.

As every thing depends upon the proper quality of the ergot, it should be kept whole in a glass bottle with a ground stopper; and only powdered, pro re nata; nor should it ever be used when it exceeds a year in age;* for the ergot, like almost every other vegetable substance, is easily acted on by heat and moisture; and consequently, it is easily deteriorated when exposed to their influence. I have in several instances failed to produce the slightest effect with the ergot procured at one shop; whilst that from another, in the same patient, has been as prompt, as efficacious.

I have generally administered the ergot in substance; some prefer it in infusion.† Twenty grains in a little sugar and water, may be

* We are, however, informed by Lorinser, (Edinb. Med. and Surg. Journal for Oct. 1826, p. 453,) that it preserves its powers perfectly for two years, as far as regards its operation on the stomachs of men; but whether it retains its specific powers upon the uterine fibre for that period, does not appear to have been ascertained by his experiments. On the other hand, we are directed by Goupil, (Jour. des Progres des Sciences, et Institutiones, &c. vol. iii. 1827, p. 170,) in order to be certain of the peculiar properties of this substance, to use it the same year in which it has been collected; and that it must be kept in bottles hermetically sealed; and not be powdered, but as it may be wanted.

† Bordot informs us, that the old women in the department of "Cote d'or," infuse a handful of this substance in a cup of water, and give a table spoonful of it every five minutes. This dose, Goupil observes,

given at once; and I seldom exceed this quantity; as I have rarely found the further exhibition of it attended with better effect. My valued friend, Dr. George Holcomb, of Allentown, N. Jersey, objects very strongly to the quantity just named; and proposes much smaller doses, but more frequently repeated; or as often as it may be necessary.*

I think I am every way right when I say, that there is no decisive instance extant, in which the "ergot" has had a direct unfriendly influence upon the child. I am aware much has been said to the contrary, by many respectable practitioners; but I think it would be no difficult matter to show, that when a still-born child has followed the exhibition of the "ergot," it has been constantly owing to the following circumstances. First, it has been given too early; that is, long before any reasonable expectation *should have been entertained,* that delivery would soon follow its exhibition, owing to the want of relaxation in the soft parts: second, given when the head has not been well situated, and the practitioner perhaps not aware of this circumstance; consequently, making a wrong estimate of the time that must elapse before delivery could take place, after its exhibition. This latter error very commonly arises, from the facility with which the head of the child may generally be felt; or its supposed disposition to escape through the external parts, because they, as well as the uterus, are favourably disposed. No mistake is more common, among those who are ignorant of the mechanism of labour; for they suppose there is little to do; and "were the pains but *a little stronger,* the child would soon be delivered:" under this delusion the ergot is given, with the expectation of a speedy issue. But this does not take place agreeably to their hopes, and very much to their surprise; for they are altogether unable to account for its failure. Whereas, an enlightened practitione would instantly have detected the wrong position of the head, and would have seen at once, how much was yet to be effected before delivery could take place. He would also have been able, very nearly, to determine the time and the degree of effort it would have required to terminate the labour; and he would

is much stronger than than that pointed out by accoucheurs; but he says we must notice the manner in which it is taken, as it is much less active than when given in powder.—Ib: p. 171.

* See Phil. Journal of the Medical and Physical Sciences, Vol. II. N. S. p. 317.

have withheld the ergot, until more had been done by the unaided contractions of the uterus. But the better to illustrate this fruitful source of error, we will first refer to the position of the head, when not well situated: and second to the difficulty the head sometimes finds in undergoing these changes, even when it is well situated, and the soft parts favourably disposed.

1st. The difficulty arising from the position. Thus, in the fourth fifth, and sixth presentations, there may be much delay, from the forehead being sometimes obliged to come under the arch of the pubes; in the two first, probably, if not changed; and unavoidably, in the last; which circumstance may have escaped the calculation of the practitioner at the time he exhibited the ergot, or he may have been ignorant of it; consequently, much unlooked for delay may ensue, and this sometimes to the injury of the child, and the uterine parietes. But in this case no blame should attach to the "ergot" specifically, for the same consequences will follow from the long-continued efforts of the uterus, where none of this substance has been administered. BAUDELOCQUE gives us instances of this kind, and every practitioner of any standing must have observed the same thing. Indeed the danger to the child after the evacuation of the waters, is always in proportion to the tonic power, and the continuance of the alternate contractions of the uterus; hence we have always reason to apprehend that the child will be still-born, when the uterine contractions continue very long, and with much force after the discharge of the liquor amnii: we are persuaded this is agreeable to the experience of all who practice midwifery. If this be so when no "ergot" has been administered, it may certainly, a fortiori, happen after it has been given, without any blame justly attaching to its powers. Some have carried their apprehensions of this substance so far as to declare it will produce vesications, and inflict other injuries upon the child's skin in the short time that shall elapse after its exhibition and the final termination of the labour. This is even more incomprehensible and incredible than the influence of the imagination upon the fœtus in utero, at least it should be classed with it.

2d. The difficulty the head sometimes finds in undergoing the changes necessary for its escape from the pelvis when the soft parts are well disposed.

This may arise from several causes. First, when a proper relation does not exist between the head and the pelvis, even when the head is well situated. When this happens, a long series of efforts will be

required to force the posterior fontanelle to place itself under the arch of the pubes, and nothing but an enlarged experience, with an entire knowledge of the mechanism of labour, will enable the practitioner to determine the quantity of force, and the lapse of time that will be required for this purpose. In this case, should the "ergot" be resorted to, it will be blamed, if the child be still-born, when it is altogether the fault of the practitioner—for in this case the "ergot" should not have been given, so long as the natural pains continued powerful; for it is not so much by multiplying the force, as by repeating its application, that the desirable end is effected. We have known the "ergot" given under these circumstances, and the uterus to become exhausted by being thus unduly urged; and the only resource ultimately has been in the forceps. Second; at other times when the posterior fontanelle has even placed itself under the arch of the pubes, it will sometimes require the long continued and the often repeated efforts of the uterus to carry the parietal protuberances below the tubers of the ischia. Now if "ergot" be given in this case, and the child be still-born, it may be blamed, when it had no agency in the disaster.

Dr. Henry Davies says, "it may be observed that in some cases, when the pelvis was a little confined, and when the head was not sufficiently low down for the application of the common forceps, the secale has been successfully used, and the child delivered with the forceps; very great discretion in these cases is required."* Dr. Davies gives several well marked instances of the influence of the ergot in feeble action of the uterus.

But certainly the most common cause of the failure of the ergot, is owing to its injudicious and indiscriminate exhibition. It has been given, we have well ascertained, before the membranes have been ruptured, the os uteri at all dilated, and the external parts quite rigid. What but defeat and injury can result from such an improper use of this powerful aider of uterine contraction? This substance is now in familiar use among midwives who have neither principles nor experience to direct its proper employment, and we are credibly informed it is used in this city by a practitioner in extensive business, in almost every case to which he is called.

This is truly the abuse of a valuable remedy; for if our information be correct, the too frequent use of it in this gentleman's practice has

* Medical and Physical Journal, July and August, 1825.

occasioned very many prolapsus uteri. This effect of the ergot may, perhaps, be questioned by some, but I have not the smallest doubt of the fact, from what I have seen when this medicine had been improply taken. A lady aborted at a little beyond the fifth month, with twins. The involucra did not come away for several days after the expulsion of the embryos; and as these came off in one mass very soon after taking twenty grains of ergot in powder, the lady could not be persuaded but that one of the placentia remained, and became very anxious for its discharge, and desired that another dose of the ergot might be given her. This I absolutely refused; but at the same time assured her, in the most positive manner, that nothing remained to come away. She, however, it seems was not convinced; for I had scarcely left the house before she caused another portion of the ergot to be given her. The consequences were a repetition of violent pains, and the escape of a considerable portion of the uterus through the os externum. She became now excessively alarmed, and I was sent for in haste. I found her in great agony; an agony resembling that of the last moments of labour; and upon examination the uterus was found in the situation just mentioned.

The uterus, owing to the constant and violent nisis created by the ergot,* was restored with some difficulty, and the pains were appeased after a while by large doses of laudanum. She was obliged to wear a pessary for a long time before the uterus recovered its position.

I am, therefore, convinced that much future injury has been sustained by giving this medicine in cases where there is little or no resistance to be overcome; for in such cases the increased efforts of the uterus, produced by the ergot, continue after the child is delivered as its impression does not immediately wear off. In this case, it took place at a time when the uterus had nothing to support or retain it within the pelvis; it must, therefore, become prolapsed if not protruded.

From what has been said, it would appear that the ergot is a pow-

* This effect of the ergot has often been noticed; the impression it makes upon the nervous system remains a long time, sometimes even after this substance has been rejected from the stomach; in this respect it is like opium and some other narcotics. Desgranges assures us he has seen the ergot ejected by vomiting, and yet the delivery has gone on with equal speed and certainty.

erful medicine; so powerful, indeed, that well defined rules should be laid down for its use. It would seem that it is the improper exhibition of this drug, and not any specific power, that creates the evils but too commonly charged to it; also, that there is no satisfactory evidence of its exercising any baleful effects upon the child in utero.

The following rules for the use of the ergot, if attended to, I think will prevent any evil following its exhibition.

1st. It should never be given before the membranes are ruptured, the os uteri dilated, and the external parts disposed to yield.

2d. It must not be used so long as the natural pains are efficient, and competent to the end.

3d. But should they flag, from any cause, it may be given; provided the labour be a natural labour according to our acceptation of the term "natural labour;" that is, when the head, (if well situated) the breech, the feet, or the knees, present. For independently of any accident which may complicate the labour, it is sometimes desirable, for the safety of the child, to hasten it when the natural powers are incompetent to this end.

4th. And if the labour be accompanied by any such accident as flooding, convulsions, syncope, &c. it may sometimes be employed to great advantage, provided rules 1 and 2 are not violated.

5th. It may be used very often with much advantage in every kind of premature labour; and at full time, when the placenta is not thrown off, and the uterus is found in a state of atony.

6th. Where flooding takes place after the rupture of the membranes; the os uteri well dilated; the pains feeble, but the child well situated.

7th. Where the head of the child has been left in the uterus by being separated from its body.

8th. Where the uterus is painfully distended by coagula.

Dr. Ward, of New-Jersey, recommends that the ergot should be used, "in alarming uterine hæmorrhages, which sometimes take place before delivery, whether it takes place in consequence of a detachment of some portion of the placenta, it being attached to the fundus uteri, or whether it be owing to a separation of its attachment over the orifice of the uterus." In this advice, I cannot agree with this respectable practitioner; for, in the first instance, he states there can be no advantage derived from exciting or increasing pain, unless the os uteri be well opened and the membranes protruding, that they

may be easily ruptured, if this can be done with propriety;* for until the liquor amni be expended, the hæmorrhage cannot be arrested by exciting the alternate contraction of the uterus; and the tonic, by which this discharge can alone, under such circumstances, be stopped, cannot take place until the membranes have given way.

In the second case in which Dr. Ward proposes the ergot, we apprehend it would be decidedly mischievous; as it is found that in placental presentations, the flooding is always increased by pain; as it directly tends to augment the separation of the placenta.

It may, however, be said, that in the unavoidable hæmorrhage, an advantage may be derived from the exhibition of the ergot, by hastening the labour, though it may, for a short time, increase the discharge. But in order that this reasoning may have any value as a practical precept, the cases in which this advantage could be derived should be extremely well defined; nothing should be left contingent in a complaint so dangerous, and which has but one successful mode of treatment, so far as we yet know; namely, the delivery of the child. Now, with these admissions, we are well disposed to receive any evidence in favor of the remedy proposed, and for the particular species of hæmorrhage in question. And, if Dr. Ward will assure us, from his own experience, that the ergot will supersede the necessity of artificial delivery, from the promptness with which it effects delivery, we will hail this substance, as one of the most valuable of our therapeutical agents; but until this is done, we shall feel a reluctance to adopt this remedy in the cases under consideration, as *reasoning* appears to be decidedly against its employment.

Let me be borne with a little longer, as this subject is one of high interest in every point of view; for a placental presentation is always one of great danger, even under the best management; and it is al-

* We say, "if the membranes can be ruptured with propriety;" for this cannot and should not always be resorted to; for instance, it should never be done when the presentation is not natural, unless we mean to proceed immediately to artificial delivery. And if this should be deemed expedient, there can be no propriety in giving the ergot, for the less opposed we are by pain, during turning, the better. It therefore, also follows that this substance should not be given in cases where it will be certainly necessary to turn; especially if the waters have been long drained off.

most necessarily fatal, under bad. Do not let me be supposed, in this investigation, to substitute reasoning for facts; for the very contrary would be my wish. But until I shall be in possession of unequivocal testimony in its favour, I shall remain at least doubtful, of the safety of employing it.

I have in so many words declared, that reasoning is against the use of the ergot in the unavoidable hæmorrhage; I will now endeavour to show this to be the case. The primary object in all cases of hæmorrhage, is to arrest the bleeding; now, in the cases in question, this is particularly necessary, if it be even temporarily; and for this purpose a variety of means are resorted to; but this cannot be done absolutely, but by delivery. Why should delivery be the only certain remedy in this case? for several reasons; first, because a temporary suspension of the bleeding is no security against its return; as the very mechanism of labour causes the placenta to detach itself from the mouth of the uterus; and when this takes place, hæmorrhage must ensue; and this in the exact ratio to the extent of the separation. Second, this being the case, it follows, that whatever tends to increase this separation, will necessarily augment the bleeding—uterine contractions have this tendency; and the ergot is almost certain to provoke or increase uterine contraction; consequently, to increase hæmorrhage. Third, because pains may exist for some time, without the os uteri being disposed to yield; yet during the return of each pain, the hæmorrhage is increased; consequently, if the uterine contractions be increased in force or frequency by any agent whatever, and the mouth of the uterus does not dilate in the same proportion, mischief, instead of good, must be the result.

For these reasons, we are of opinion, that the ergot should not be used in cases of placental presentations, as a general practice; and if used at all, it should only be when the os uteri is well dilated, or easily dilatable. In such cases, it may be occasionally useful, by urging the uterus to brisker contractions; and thus effect the delivery of the child, as speedily, perhaps, as if turning had been resorted to; especially, if this must be attempted by the inexperienced practitioner.

The ergot may be used with a fair prospect of success, when the head of the child has been left within the cavity of the uterus after the delivery of its body, when no objection can arise from the unhealthy condition of the pelvis.

I have also derived much advantage in several cases of menorrhagia, where the long continuance of the disease, rather than the immediate excess of the quantity discharged rendered it important, it should be arrested. I have given in such cases one grain, three times a day, in the form of a pill, and continued it for some time.

It may also be useful in cases of polypi; where it shall be desirable to force these substances beyond the neck of the uterus, for the purpose of applying a ligature, or with a view to their excision. I have sometime since, suggested its probable usefulness in hydatids of the uterus;* and its value in such cases has been in part realized by Dr. MACGILL.†

* See Treatise on the diseases of Females, Chap. "On Hydatids of the Uterus," by the author.

† See his interesting case in the preceding number of this Journal, p. 240.

ORIGINAL REVIEW.

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[From a Correspondent.]

Observations upon the Autumnal Fever of Savannah. W. C. Daniel, M. D. "Le premier devoir du Medecin, est d'agir sur le principe de reaction." Savannah. 1827. 8vo. pp. 152.

Of the practical portion of the above work, we propose to give a brief analysis. The author is known to the American medical public, as the earnest eulogist of charcoal in constipated bowels. The fate of the work now under consideration must ultimately rest on its agreement, or disagreement with the unalterable laws of morbid action. We say unalterable, because however specious may be the opinion entertained by many eminent physicians, who believe that diseased action is regulated by no fixed principles of rise, progress and termination, we do yet espouse the doctrine of Sydenham, set forth in the preface to his noble work. But we must dismiss all such discussion at present, and enter directly on the duty before us.

Dr. Daniel's motto is deserving of a passing remark. We cannot think that there is any truth in the asseveration therein set forth, that "the first duty of the physician is to attend to, or be governed by, the principle of reaction." The first and most important thing which should challenge the attention of the physician, when about to enter upon an examination of a clinical case, is the present symptoms manifested by the disease. To weigh in an exact balance the degree of importance which should be attached to each phenomenon; the mind must retrospectively consider the case, in its origin, its causation.

and the condition of the individual's health, and peculiarity of constitution as modified by climate, habits of living, &c. at the time of the seizure. It is a fallacious mode of reasoning to elevate one phenomenon or principle, into exclusive consequence. Every symptom must be noticed in its due order and degree, and every law of the system be kept in view, if we wish to unravel the intricacy of the case.

Let us advert to the different theories advanced on the subject of fever, and we shall see an illustration of this remark. Some system mongers have regarded pain in the head and sensorial disturbance, as proofs, infallibly certain, that fever had its exclusive lodgement in the brain. Others have seen nothing but gastric derangement in febrile attacks. Cullen took the skin as the main region of the enemy's encampment. Dr. Daniel has seen fever very palpably entrenched in the capillaries of the skin and internal tissues. As his practice is grounded on the pathological views taken by him, of the site of the disease, we are obliged to transcribe a portion of his doctrinal exposition.

"It has appeared to me far more reasonable to suppose, that autumnal fevers (under which he includes intermittent, remittent, continued and yellow fevers) are produced by qualities imparted by marsh, miasmata, to an atmosphere, which, thus impressed, impairs the capillary action of the skin, and affects the equilibrium of the circulation; the destruction of which creates an effort in the internal capillaries, now surcharged, to relieve themselves, *which reaction constitutes fever.*" p. 47.

The author refers us in the margin to Cullen's First Lines. Let us enquire of the Edinburgh professor, what his views were, and then determine whether Dr. D. is chargeable with innovation "on the long established opinions of a whole profession."

"The idea of fever, says Dr. Cullen, then, may be that a spasm of the extreme vessels, however induced, proves an irritation to the heart and arteries; and that this continues till the spasm is relaxed or overcome." Again, "from many circumstances it is sufficiently certain that there is a consent be-

tween the stomach and surface of the body"—that it is such "that a certain condition prevailing in the one part occasions a similar condition in the other." x L i. and x L iv. Upon a careful scrutiny of the theory of Cullen, we shall discover the germs out of which have grown many subsequent explanations, couched perhaps in a language somewhat different, and with some additional engraftment, but yet containing the seminal doctrines of the great master of modern medicine.

We do not exactly comprehend how Dr. D. can make the following observations harmonize with his practice; and especially how it could escape the pen of a gentleman who seems gifted with fine sagacity, and has a mind stored with extensive medical erudition. "Agents acting moderately, and for a considerable time upon the external capillaries, impair the functions of the internal, by casting upon them an undue portion of blood." p. 49. On page 51, he remarks, "the causes of fever operating on the superficial capillaries, repel the blood from the surface."—This is substantially the Cullenian hypothesis, and although we hear nothing of the "sedative powers applied to the nervous system, which diminishing the energy of the brain, thereby produce a debility in the whole of the functions, and, particularly, in the action of the extreme vessels." Yet we have an impairment of the energy of the capillaries of the surface, which propagated to the internal capillaries, rouses them into violent reaction, *which reaction constitutes fever.* There is a process of ratiocination which logicians term *reductio ad absurdum*—where by carrying out the principles announced to their final conclusions, we see, at once, that there is error instead of truth, upon which the process is founded. We will not here insist on this mode of decision, because we would violate the rule of Horace,

"Nil agit exemplum, litem quodlite resolvit."

But in every tentative art a few facts are worth more than a multitude of ingenious reasonings. There are some very strong facts which directly confront the statement of Dr. D. in the explication of his theory of fever. In the first place.

fever frequently occurs without previous chilliness of the surface. In the next, great diminution of energy in the cutaneous capillaries may take place, without fever succeeding: as occurs in healthy constitutions when, exposed to a cold atmosphere, or after being plunged in a cold bath.

Dr. Curry, the elegant and accomplished writer on cold water, has remarked that the injury sustained by persons going into a cold bath, or drinking cold fluids, when heated by exercise, does not originate, as Dr. Rush supposed, from their being in a state of perspiration, and in a high degree of animal temperature, whilst the fluid is very cold; but in the defective resistance of the system arising from the exhaustion, superinduced by the previous exercise, or muscular exertion.

There is scarcely any one physiological fact more extensively recognized, than the connexion, intimate and reciprocal, existing between the skin and the internal organs. We misconceive the matter much, if we restrict this union to a mere hydraulic phenomenon. Because there does, at times, exist great determination to the liver and spleen, as in the cold stage of an intermittent fever, with diminished action of the skin, this does not warrant us, in hastily inferring, that in all cases of internal inflammation, a constricted condition of the surface must be present. Medical experience contradicts this supposition; for in pleurisy and acute hepatitis, we have high temperature of the skin, and its secretory function cannot be restored, till the subsidence of the excessive action.

But we must, with another remark, enter upon more practical ground. It is this, that the consent which obtains between the skin and internal organs, is not always the same in its mode of agency. Darwin divides it into direct and reverse. It is direct when there is a simultaneous augmentation or diminution of action, in both systems of vessels. As in the cutaneo-hepatic sympathy, and where warm fluids taken into the stomach immediately occasion increased glow on the surface. It is reverse, when diminished action on the skin creates increased determination on the internal parts, or vice versa.

We think it unnecessary to give a more detailed view of Dr. Daniel's theory, which occupies, with its direct and collateral

illustrations and arguments, about one fourth of the entire book. Our main design is to bring before the profession more generally, the novel views of practice with which it abounds. Dr. D. asks the question, is autumnal fever inflammatory? He answers it in the following way. "If the preceding observations are not wholly without foundation, it is evident that our autumnal fevers have not an inflammatory character, and that, in truth, they are diseases of debility. The loss of the system by the almost constant and free perspirations, during hot weather, is certainly calculated to induce debility." p. 77.

Again the Dr. says, "in all inflammatory diseases, the heat of no part of the system is below the healthy grade; and frequently in every portion it is above it." And next page, "extreme debility and loss of strength are not attendants upon all stages of inflammatory diseases." Now the truth of these remarks, which the Dr. so confidently urges, we are disposed to think dubious: with regard to our own autumnal fevers, we *know* them to be erroneous. And we have the testimony of Mosley, Cleghorn, Bancroft, Hillary, and Johnson, to countervail their justness, as regards tropical fevers. We are far from attaching misrepresentation to Dr. Daniel. But misconception and misinterpretation of nature are too common in our profession, not to delude the most enlightened minds on some occasions; and perpetually to put us on the alert in detecting our own, as well as the mistakes of our professional brethren. We transcribe the following as an evidence of this inconclusive reasoning.

"It has been frequently urged, that our fevers are at first inflammatory, but that they soon run to a state of debility, and that bleeding is to be limited to the first stage. It need only be replied to this paradox, that as the stage of debility is the only one attended by danger, the influence of which is chiefly to be resisted, it cannot be judicious to precipitate that condition, by reducing the tone of the system, and adding to the consequent debility."

"The classification of the pulse by Dr. Rush, certainly has not added to our knowledge of it."

We look upon the above remarks as of hasty concoction. Has not more liberalized and improved experience taught

us, that in puerperal fever blood-letting, copious and profuse, is in the first stage, the only chance of saving the patient? If any one can read Armstrong's essay on puerperal fever, and not determine at once that Dr. D. has mistaken the truth of his exposure of the paradox, we will agree, that medicine is a useless and nugatory art.

We agree with Dr. D. in the correctness of the following remark, with some qualification.

"The physician who, disregarding other circumstances, relies on the manifestations of the pulse, or the condition of the blood, to indicate the remedies in the treatment of our fevers, will have reason for regret, and leisure for repentance."

We think, as already observed, that no one symptom should be exalted in our contemplation to the neglect of the others present; but, that the pulse is a very important guide in conducting to a correct estimate of the case, there can be no manner of doubt, when it is recollected, that it indicates the power or failure of the heart's action. We might *a priori* deduce the importance of the heart from its commanding position, and essential functions, from its prime agency in building up the system from its embryo condition to its most composite formation, and from its constant propulsive force employed in impelling the blood through every part of the frame; but it is enough to say, that though the pulse be not a perfect nosometer, as Dr. Rush would have it, yet it is a pretty sure index, pointing to the exact state of the system, and, taken in conjunction with other symptoms, it is never to be disregarded in guiding us to a correct inference of disease.

Dr. D. further observes,

"It has been remarked, that blood drawn from persons under autumnal fever, exhibits evidence of inflammatory character. I have never seen such. No one will deny, that blood drawn from a patient does frequently, according to our imperfect notions of the subject, indicate a condition of the system, very different from what other, and more satisfactory manifestations, would authorize us to admit. In some obviously atonic conditions of the system, blood drawn is considered to indicate a state of active inflammation." p. 80.

We concur with the statement of the last sentence. Sir A. Cooper says, that he has seen blood taken from a man in the last stage of scurvy, exhibit a huffy coat. But the great pathologist, Parry, has remarked, that even this once reputed putrid disease, scorbutis, is inflammatory: for local inflammation may exist in connexion with general prostration. Forbyce's experiments prove that the appearances of the blood detracted from a patient are essentially modified by the size of the orifice, and the vessel into which it is received; therefore, this is not to be depended on, to any extent, in conducting our minds to a judicious decision on the nature of the case. Dr. Daniel, in vindicating his views of the adynamic nature of autumnal fever, makes the following sweeping asseveration.

"It will be difficult to find an experienced physician in the southern states, with so little regard to his own reputation, as to claim any thing like success, in the treatment of severe cases of fever, by the depleting system." p. 81.

We refer to Dr. Cartwright's papers, published in the Medical Recorder, January and April numbers, 1826, for a direct practical contradiction of Dr. Daniel's assertion. Although we do not approve of Dr. Cartwright's practice *toto cælo*, yet we consider it far more safe than that recommended in the work under review. Dr. D. can see nothing in post mortem examinations which in the least substantiates the inflammatory nature of autumnal fever. Here he is again opposed by the positive statement of Dr. Cartwright, as well as by cases left by the much lamented Lawrence, and published in Chapman's Journal. We will close this part of the analysis by a quotation from Dr. D., which goes to the entire discomfiture of his doctrine, if the resemblance be such as the Dr. considers it.

"I have frequently been struck with a great similarity of general expression (if I may so speak) between persons in the advanced stages of yellow fever, and those who have suffered from lightning, without perishing." p. 91.

If the parallelism be just, then we may very confidently make the averment, that autumnal fever *is* of an inflammatory

character. The electric fluid is stimulating in its very nature, when applied to the living solid—it augments muscular contractility, imparts impulsive influence to the heart, and so remarkably promotes nervous energy, that Wilson Philip concludes, that the nervous power, and the galvanic, or electric fluid, (which are now considered identical) may be the same.

As intense electricity will extinguish life by an excess of stimulation, so when autumnal fever runs high, the vital energies may be suddenly crushed before perfect reaction can ensue.

Dr. D., page 94, enters upon his animadversions on the mercurial treatment in autumnal fever. He says,

"Whilst the American and British physicians claim for this medicine (mercury) a controlling influence, those of the European continent as generally deny its virtue in these diseases."

And where shall we go for better practitioners in the healing art, than are to be found in North America, and in England and its dependencies? Shall we seek medical wisdom from the French *medicine expectante*, or art of curing disease by meditating on the progress of death, without active interference; or shall we listen to the oracles of the counter stimulant school in Italy, for instruction? Dr. D. has passed rather an eulogy on the remedy, when he thus runs a tilt at the most enlightened and most experienced physicians of the present era.

We will now pass on to his treatment. The first remedy mentioned is *sinapisms*. He says,

"It is obvious that the great advantages derivable from the use of sinapisms, are attributable to their revulsive power; which equalizes the circulation, and aids the other means, in maintaining an equa distribution of blood." p. 110.

Again,

"Whether the pulse be full, rapid, irregular, and frequent; or thin, feeble, and quick, the inflammation of the skin by sinapisms, improves its character, and approximates it more nearly to a healthy condition. Whether the heat of the system, generally, be above or below the

grade of health, the successful applications of sinapisms, restores it much more nearly to its ordinary standard. Whether the skin be hot, harsh, and dry; or cold, shrivelled, and bedewed with clammy perspirations, the inflammations produced by sinapisms, very much improve its condition." p. 112.

The mustard plaster is best made, says Dr. D., with powdered mustard-seed and hot water, with no flour in it. The extremities and abdomen are the most eligible places for their application. A rubefacient, and not vesicating effect, is the object. Applied just before an anticipated attack of ague, the application of sinapisms to the ankles and abdomen, prevents it with great certainty.

"In the treatment of the fevers of children, sinapisms are frequently of great value, and especially when in the progress of the disease there is a tendency to collapse." p. 114.

We have known blisters, within the ordinary time, in fevers both of adults and children, produce by excess of inflammation, death of the rete mucosum and true skin, with subsequent sloughing. In several children we have known death ensue from mortification of the part, the blisters not remaining on beyond the proper time for due vesication, because they were *applied too early;* that is, before a subsidence or reduction of febrile excitement had been effected. The irritation produced by a mustard plaster, is much more intense, and is, commonly, not relieved by any consecutive effusion of serum. We, therefore, consider the above practice recommended for fever in children, as fraught with the most disastrous consequences. We hold, with Dr. Rush, that there is a blistering point in fever, at which time the application of blisters has a most salutary influence in taking off the stricture-state of the skin; in producing a centrifugal action in the circulation, and by counter irritation relieving the internal organs. But that either blisters or sinapisms, are proper in every stage of fever, is a statement altogether at varience with our own clinical observations, and contrary to the accumulated testimony of the profession.

The second remedy proposed is the Capsicum Annuum, or red-pepper.

"I am much at a loss for a phrase by which to mark the character of this medicine, as I am unable to find a proper class for it. It is so essentially different from every article of the materia medica, as to be entitled to a place by itself."

"Cayenne pepper comes admirably in aid of sinapisms, in equalizing the circulation and heat, and preparing the system for the administration of the serpentaria, or bark, or both. It is equally important, in removing the cold stage of adynamic fevers, and in sustaining the system against the recurrence of the paroxysm. It gives elasticity and moisture to the hot, harsh, dry skin, and has a powerful influence in checking profuse cold, and clammy perspirations."

"This article certainly exercises a very extraordinary and peculiar power upon the capillary vessels. In its action it is essentially revulsive. By invigorating the capillary action, it sharpens the sensibilities of the system." pp. 118—119.

The article is used in the form of infusion:—

"Say a table-spoonful of the powdered Cayenne to a pint of boiling water; of which from a table-spoonful to a wine-glassful may be given every hour (or *in extremis*, oftener) according to circumstances."

The other articles employed by Dr. D. are *Serpentaria Virginiana*, *Bark*, *or Sulphate of quinine*, *Arsenical solution*, ten drops every four hours, small doses of opium, affusion of cold water, enemeta of iced water, and carbonate of ammonia. These articles are auxiliary to the sinapisms and Cayenne pepper: all act revulsively. Cold water and mustard are here made to harmonize—iced water and Cayenne pepper to unite and co-operate!

We shall copy the recapitulatory remarks of the Doctor's entire theory and practice, and with some general reflections, close our analytical enquiry.

"In the treatment of our autumnal fevers, my attention is mainly directed to the fulfilment of two indications. The first is, to diffuse the circulation equally throughout the whole system. Upon the success of this, depends the relief from local plethora and congestion, causing pains in the back, bones, and head; delirium, tenderness of the stomach upon pressure, nausea, vomitings, and incessant but unavailing retchings, sense of fulness in the abdomen, sensations of internal heat, restlessness, sighing, costiveness, dry, parched tongue,

&c. &c. The second indication is, to give tone and energy to that diffused action of the vascular system. By its fulfilment, the local affections above recited, are prevented from recurring; tone is given to the capillary circulation; the energies of the system impaired by the disease, are invigorated; the debility upon which it subsists, is arrested; and the fever disappears. The first indication is to be fulfilled by inflaming the skin, extensively, with sinapisms."

"The second indication is to be fulfilled by the administration of the bark, serpentaria, and, Cayenne pepper, in as large and frequent doses as the stomach will bear, and the condition of the patient demand." pp. 125—126—127.

"Wine and porter with the ordinary nutrientia are given after an appropriate impression is produced by the sinapisms, Cayenne pepper, &c. Ardent spirits are improper, for they have an ulterior sedative operation. Emetics and purgatives are exceedingly dangerous remedies."

"It will be at once perceived, that this foregoing system of treatment depends for its success, mainly, upon its revulsive powers over the system. It is this I am chiefly desirous of impressing upon my readers; for I have no doubt that any other plan of treatment, equally revulsive in its character, and equally suited to maintain an equalized action of the system, when once produced, would be full as efficient."

We are of this sentiment likewise, if by equalized action be meant a healthy diffusion of excitement; but it is not to our taste, nor consonant with our views, to speak thus, in set mechanical phrases, about the organized living system. Our opinion is, that the body is governed by laws entirely dissimilar to those which controul inorganized matter, and that the sensibility and contractility, sensible and insensible, animal and organic, to employ Bichat's terms, are always to be taken into our estimate; and duly appreciated whenever we endeavour to solve the problem of diseased action. These laws may be modified by various extrinsic agencies, yet though subjected to such modifications, their peculiar nature is never lost. We can never admit, that even in diseases confessedly having their origin from the agency of debilitating causes, such as the depressing passions, or exposure to cold conjoined with humidity, we can pursue a stimulating treatment. For then we may give pepper tea in mania; or alcohol in gout, or jaundice. When the system labours under disease of any kind, there

must be debility present in a direct ratio to the violence of the morbid action. Strength is an attribute of health; debility is a *symptom* of disease. Well has Professor Thompson of Edinburgh, in his masterly work on Inflammation, said that debility is too often a mere *asylum ignorantiæ;* and well has Johnson said, that it is often nothing but a "bug bear," to frighten into an imbecile course of procedure, the medical attendant. It seems like an attempt to roll back the advancing tide of medical knowledge, and to restore the fiery reign of Brunonianism, to insist on the adoption of Dr. Daniel's plan of treatment in autumnal fevers. Surely we should grow wiser by the dear bought experience of our predecessors in medicine. Let us hear what a distinguished man says, as regards his own career, in a southern climate.

"To show," says Dr. J. Johnson, in the first volume of his excellent work on Tropical Climates, "how dangerous it was to draw conclusions respecting *debility* from the salutary operation of stimulants in fever, the following example may suffice. From deranged balance of excitability the heart and arteries become incapable of performing their office in a proper manner;—if their excitability be too great, they drive the blood with an impetus to the brain that may cause delirium: if their excitability be defective, the heart is incapable of unloading the venous system, and distension of the veins and sinuses of the head, produce the same effect. Now wine, if given *judiciously*, and to a certain extent, in the *latter case*, will impart such vigour to the heart, as will enable it to unload the venous system of the brain, and thereby remove delirium, without giving too much impetus to the arterial system: but if the same medicine be exhibited in the former case, it will evidently increase the symptom it was intended to relieve." p. 66.

Again, after detailing his plan of treatment in the endemic fever of Bengal, he says,

"The plain truth was that I knew not what to do; for the sudden and unexpected failure of that medicine, (the Bark) on which I was taught to depend, completely embarrassed me, and before I could make up my mind to any feasible plan of treatment, my patient died, on the third day of his illness, perfectly yellow, &c. p. 80.

Our illustrious countryman Rush, gives us in his history of

the yellow fever of 1793, an account full of interesting and instructive matter, relative to his own difficulties and painful embarrassments, in striking on a judicious course of practice. After using bark and wine, he finally adopted that more successful method of treatment, which Dr. has anathematized as founded in error, and propagated in delusion.

Let us do justice, however, to the author, whilst we criticise his misconceptions and too hasty generalization. We do not doubt but that Dr. D. may have treated some cases of fever with success by pursuing his plan. In the shattered constitutions of the ill fed and hardworked slaves, and in the cases detailed by him of certain men from a schooner, in the prostrated stage of fever, we do not hesitate to admit the propriety of his praxis medicinæ.

There is a pervading spirit of original thought about the work which we much admire. The introductory remarks on the *dry culture system*, now coming in common use about Savannah, in the cultivation of the rice plant, are well worth a careful perusal. We regret that the Dr. had not waited for the ratification of a longer period of time than "*several years*," in which his system of treatment might have passed through the variations of a more diversified field of observation and experience.

The literary execution of the work is very respectable; the style is perspicuous, and in many places vivid; but we regret to observe several manifestations of mental irritation, created by the wrongs endured from his fellow practitioners, on account of his novel views. In a liberal profession like that of medicine, such intolerence is not only discreditable, but destructive of the elevated objects to which it aspires;—but if a physician throws the gauntlet, he must expect it to be taken up; and as Dr. D. is by no means sparing in his reproofs and criticisms, he ought to have anticipated, and cheerfully submitted to, a free scope of reprisal. J. P. H.

Louisville, Ky. Jan. 1828.

SELECTED REVIEW.

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ART. IV. *De la Non-existence du Virus Venerien, pronvee par le raisonnement, l'observation et l'experience; avec un Traite Theorique et Pratique des maux Vencriens, redige d'apres les principes de la Nouvelle Doctrine Medicale.* Par L. F. R. A. RICHOND DES BRUS, Du Puy, (Haute-Loire,) Docteur en Medecine de la Faculte de Paris, 1826. &c. &c.

[Extracted from a Review in the American Journal of the Medical Sciences, No. 2.]

We have now arrived at a subject much dwelt upon by M. Des Brus, and one for which we anticipate much greater opposition, than any other topic connected with these investigations—namely, *the non-existence of the veneral virus.*

The existence of such a matter or substance as that called the venereal virus, has until very lately been so firmly and universally believed, that persons venturing to doubt it ran more risk of being denounced as visionary and sceptical, than of attracting any respectful attention to their opinions. When it is considered that the actual being and presence of a specific poison, constitutes the basis of all former pathology and practice in syphilis, it may be readily conceived that the consequences of the contest are of the highest importance, as the establishment of the new doctrine would be like erasing from a tablet the useless records it contained.

But lest it might be inquired what we mean by the term *specific virus*, we will anticipate the question by answering, a morbid secretion, which applied to the animal system, produces a peculiar action, similar to that by which it was generated, manifested by a regular and uniform train of symptoms. As examples we refer to the secretions in the well known diseases variola, vaccina, and psora.

Let us see what success is likely to follow the reasoning, observation and experience which may be advanced to disprove the existence of that morbific matter asserted to have been first introduced into the old world from America, and which has been characterized by vari-

ous writers as an inflammatory, acrimonious, corrosive, acid, alkaline, glutinous, sulphurous, and even electrical substance.

The first argument advanced by M. Des Brus in favour of his opinion is founded upon a position laid down by Cicero in his second philippic, namely, "that nothing is less worthy of a reasonable man than to oppose against one with whom he may have a dispute, an opinion which the other has only to deny in order to stop short all opposition in his opponent, and to show that it ought to be rejected, seeing that it only reposes upon a fable destitute of all proof." Upon the strength of this classic logic, M. Des Brus calls upon the believers in a virus to demonstrate its existence, and to say what it is, and where it is.

The *contagion* of venereal affections affords, perhaps, the strongest proof in favour of the existence of a specific venereal virus But it must be observed, that the form communicated is not, as has been strenuously maintained, always of the same character with the original affection, individuals contracting their diseases from the same source, often presenting the most different trains of syptoms. As well, M. Des Brus thinks, may it be argued that the coryza attending inflammation of the mucous membrance of the nasal cavities, depends upon a specific virus, because the secretion applied to the same membrane of healthy persons, will, as he asserts, excite a similar affection. The same results follow the application of a morbid secretion from any other mucous surface when applied to one in a sound state. That of the eye in purulent ophthalmia is adduced as a familiar illustration. In these cases it is manifest that the secretory organs are deranged and their discharges altered, and that they acquire from inflammation qualities sufficiently acrimonious to produce an irritation in the parts to which they are or may be applied. Why, it may be asked, may not the same thing take place in venereal irritations.

M. Des Brus cites very many interesting cases to prove that the syphilitic affections propagated to several sound persons who may have had connexion, about the same time, with the same infected person, unlike what might be expected from the direct application of a specific poison very often differ greatly from each other. Of the truth of this our own observation has furnished the most ample evidences. Appealing, however, to the examples cited by him, we shall at the same time present his rational as illustrating very clearly the views he takes of the subject.

"Six friends," says he, quoting from Vigaroux, "after a hearty repast, had connexion with the same girl, who communicated the pox to them all. The disease, however, manifested itself among them with different symptoms. Two of them had chancres and buboes; two others, gonorrhœa; the fifth had a chancre; and the sixth a single bubo. One of those who had chancres and buboes was soon cured by a regular treatment with frictions: the other with the same affection, had his bubo to suppurate, the skin to separate, become spongy and perforated. He became dejected, salivation took place, the submaxillary glands became engorged; the discharge from the chancre ichorous; he lost his strength, and sunk. He who had only a chancre, burnt it out, and experienced no inconvenience after marriage, his children proved healthy. Of the two who had gonorrhœa, one experienced it in its mildest form, whilst in the other, on the contrary, it was attended with exceeding virulence, and resisted the efforts made to cure it, for ten months."

In relation to this case, M. Des Brus observes—

"In vain may we seek to account satisfactorily for these different phenomena, otherwise than by referring to the different excitability of the several patients, and to the various degrees of inflammation occasioned by the connexion. This afforsd the only rationale, which will apply equally well to them all, whatever may have been the irritating principle which produced the disorder. Let us suppose that these six individuals had been exposed to the contact of certain vegetable juices, alkalies, acids, corrupted animal matters, etc. The effects produced we should account for thus:—With two of the persons allnded to, the irritation occasioned by the excitant predominating upon the extremity of the mucous coat of the urethra, would cause this to inflame, and it being the property of inflammations of the mucous surface, to give rise to a mucous discharge in greater or less abundance the affection we call gonorrhœa would have been produced. One of these patients presenting a greater excitability of this part than the other, or the inflammation having manifested itself with more violence, the result was a difference in the intensity and duration of the disease. With two others, either from greater sensibility of the glans, or the more intimate application of the irritating fluid to this part, ulcers were produced upon it; the irritation propagated along the lymphatic vessels to the inguinal glands, gave rise to a bubo, in the same manner that we see swellings of the sub-maxillary glands occasioned by salivation. In the first the symptoms were perhaps dissipated by the mercurial treatment producing upon the excretory organs and lymphatic system in general, a true revulsion

to them of the irritation seated upon the genital organs. With the other, either because the glandular inflammation was too profound, or that it had been aggravated by the stimulus of the mercury, suppuration took place, the cellular sub-cutaneous tissue was destroyed, and the skin left without support, sunk down—a prey to disorganizing inflammation, it wasted away, becoming thin and perforated. On the other hand, irritation of the salivary organs was produced by the mercury, the mouth became tumid, as well as the sub-maxillary glands. The gastric viscera participated in the excitement as happens on ordinary occasions. Hence loss of strength, ichorous suppuration, dejection, and finally death. With the sixth, the excitement of the penis not sufficient to establish an ulcer, was nevertheless capable of exciting sympathy in the inguinal glands, which, predisposed to irritation, swelled in the same manner that they are seen to do after a prolonged march."

Should the believers in the specific virus attempt to explain the varied effects observed in the cases just related, by ascribing them to the different dispositions of the individuals, we would reply, such indeed *may have been* the case, but why resort to obscure hypothesis, to explain what may be satisfactorily understood without.

But how can we resist the positive proofs of a virus furnished in the experiments of Mr. Hunter, who, by inoculating with venereal matter, produced that disease in sound persons. Those who will take the trouble of examining the records of these experiments with attention, will not, we think, feel bound to believe in the existence of a specific venereal virus. All the results observed will admit of the easy mode of explanation which has already been applied so satisfactorily by M. Des Brus, to the solution of other cases. Many experiments of inoculating with venereal matter, similar to those of Mr. Hunter, have been made in France, by MM. Dubled, Bertin, Dupau, Des Brus, and others, which show that the matter of gonorrhœa and chancres rarely produce any lasting effects, when applied and even inserted into other tissues, except those with which they usually come in contact during the act of coition. Venereal pus, it is true, *may* become the cause of an ulcerative inflammation, but under these circumstances the phenomenon is *purely local*, and like other inflammations, may give rise, either through sympathy, or continuity of tissue, to various changes in the neighbouring or distant organs.

It would appear that the believers in a virus have in France, lately

availed themselves of the unhappy results of an experiment by inoculation, for the support of their position, which, like certain religious appeals, are calculated to take stronger hold on the prejudices and feelings, than on the reason. This circumstance we shall relate in the words of M. Des Brus, giving at the same time his comments.

"In opposition to my reported experience, there will doubtless be cited the results, obtained by three young physicians who inoculated themselves, which have been pompously announced in the medical journals. Each of the three, it is said, made a puncture in the arm with the point of a lancet, charged with syphilitic matter. In one, swelling of the axillary glands took place, which, treated by antiphlogistics alone, went on to suppuration, and produced considerable injury of the axilla. In the second, the puncture inflamed and ulcerated; a chancre presented *all the venereal characteristics*, established itself, and made extensive ravages. But admire how far the love of the marvellous will carry us: it is pretended that this young man, after consulting a professor of the medical school, who told him that the ulcer was *venereal*, and that he must resort to mercury, went into the hospital and opened the crural artery!!

"What, this young physician, who, inflamed by the laudable desire of throwing light upon an obscure point of science, had not scrupled to try upon himself an experiment reputed dangerous, and who had been lead by observation to question the evidences of a venereal virus, to lose both reflection and courage so as to be driven to commit suicide; merely too because a professor had told him that he had the pox! And what great matter was there even if it had been so? Could he not have resorted to mercury for its removal, if, confiding only in the edicts of the professor, he was not able to rid himself of the idea that the employment of that medicine was absolutely necessary? Or, was he determined by shame or vexation not to survive a defeat? The supposition cannot be admitted, for what did the ulcer with which he was affected prove? Nothing more than that the pus applied had acted as an irritant. Now it is not probable, that before submitting to the inoculation, he could have been ignorant of the circumstance, that inflammation often gives to the fluids secreted on parts where it is seated, acrimonious and irritating properties: that accidents often occur from scratches made by instruments impregnated with the sanious humours of a wound or dead body: und he ought to have been familiar with many facts similar to the following, reported by M. Begin. Opening, with M. Broussais, the body of a man who had died of gastro-enteritis, accompanied with adynamic symptoms, M. Begin experienced an insupportable sensation of burning, in consequence of having touched the intestinal contents, and had likewise a consid-

of having touched the intestinal contents, and had likewise a considerable swelling of the hand, as well as an abscess upon one of his fingers, although neither he nor M. Broussais, *who experienced similar inconveniences*, had been wounded by the knife. Every thing, therefore, conspires to render it likely, that the subject of this experiment was driven to suicide by other causes."

The case of the third young man is reported to have presented *diverse positive symptoms o vener eal infection.*

"It is greatly to be regretted," says M. Des Brus, "that these young men have offered no conclusions upon their observations and experience. Their testimony would then have had more weight, and might have served to confirm or disprove the conclusions which it has been attempted to draw from them."

M. Des Brus thinks that the symptoms exhibited in these three experiments, do not at all establish the existence of a virus. That in the axillary engorgement of the first, there was nothing extraordinary. Among other circumstances referred to, in order to explain the phenomena, he cites some of interest from his own personal experience. On one occasion, having received, whilst opening a dropsical subject, a slight cut upon one of his fingers, pain in the arm soon ensued, together with violent inflammation, and swelling of the glands in the axilla, which were subdued by leeches and other appropriate means. These symptoms were attended with an acute gastro-enteritis, produced from the ganglionic irritation, referred to the mucous coat of the intestinal canal, succeeded by a pustular cutaneous eruption on the trunk of the body, so that it was only necessary that he should have been inoculated with venereal matter, to have constituted a case of syphilis. All this and more is adduced, to prove that the axillary engorgement in the young experimenter, did not proceed from the introduction of a specific virus.

The ulcer which manifested itself on the second, was nothing uncommon, since a splinter, or the acrid juice of any vegetable might, have produced the same effects. As to the characters of syphilis, M. Des Brus demands what else they are than the ordinary products of irritation. So much, therefore, for the evidences of a virus furnished by inoculation.

It has been our own lot to witness many instances, in which symptoms have occurred from other causes, not to be discriminated from

those ensuing to venereal affections taken in the usual way. Of these we will take the liberty of mentioning one, the case of a widow lady of catchectic habit, who was suddenly attacked with an alarming sloughing ulcer just above the heel of the right foot. After the loss of considerable substance, the ulcer healed under the use of generous diet and tonics. About two weeks afterwards, however, a swelling took place in one of the right inguinal glands, which proceeded rapidly to suppuration, and on being opened, discharged most abundantly a thick pus. This soon got well under the treatment previously prescribed. About a week or ten days after the removal of the inguinal affection, she was attacked with severe colick, accompanied with spasms, and strong indications of a disordered condition of the digestive organs, soon after recovery from which, she went into the country, staid about three weeks, and returned apparently in better health than she had enjoyed for a long time. In a few days, however, she complained of soreness about the bridge of the nose, where there existed a considerable redness. A wash of lead water and laudanum was directed externally, and internally the decoction of sarsaparilla, along with colomba. A plain nutricious diet was enjoined. The soreness was relieved, and the redness disappeared in the course of three or four days, and we now thought every thing right again. In about three weeks, however, we were called upon by the same lady, to witness a papular eruption on the hands and arms, which, however, soon disappeared, and proved the finale. We regard this case as illustrating most happily the chain of connexion subsisting between the various tissues and organs of the body, and the manner in which impressions are transmitted from one to another. In a catchectic state of the system, produced most probably by a derangement of the digestive organs, the heel became the focus of morbid irritation, probably first set in motion there by some injury too slight to be noticed. From thence it was propogated successively to other parts, according to laws regulating the phenomena of diseases. Had we not witnessed the primary affection, and our patient been in any degree susceptible of a suspicion of venereal indulgence, (which was altogether impossible,) no human power, we believe could at that time have convinced us, that the venereal virus was not at the bottom of the case. Here then we have the usual consecutive phenomena attendant on venereal affections, without the presence of a specific venereal virus.

All who have possessed opportunities of paying much attention to venereal affections, must have frequently witnessed the transition of the inflammation and irritation attending upon simple gonorrhœa to the glandular system producing soreness in the lymphatics of the penis; swelling of the inguinal glands, testicles, ect. rheumatic affections of the muscular and membranous tissues, irritation of the mucous membrane of the fauces and other parts, cutaneous affections, etc. in fact, all the symptoms commonly observed to follow venereal sores. Now, if it can be demonstrated that a similar train of symptoms may be produced by other means, and entirely without the agency of venereal matter, it results that there is no necessity for the agency of a specific virus, in order to explain the rationale of syphilitic affections. We have seen a simple warty excrescence which existed on the prepuce for several weeks as the only evidence of an impure connexion, converted by the injudicious application of caustics and other means used for its removal, into a foul and irritable ulcer, deep, livid, surrounded by callous edges, and withal exceedingly obstinate to heal, giving rise subsequently to a tedious and inveterate train of constitutional symptoms. And yet such warts under ordinary circumstances are readily removed by simple applications, and seldom or never, according to our experience, occasion any other than mechanical inconvenience, unless some such violence as that above described, has been applied to the tissue. We have therefore no hesitation in believing that under such circumstances it is not a virus that does the mischief, but irritation and inflammation roused and determined in its natural direction, a doctrine which we think applicable alike to all manner of venereal affections.

M. Swediaur, the firm champion of a specific venereal virus, has reported a most admirable experiment performed upon his own person, which we think should have taught him different views from those he maintains in his work upon syphilis. By injecting a strong solution of sol. ammoniac a very little way into his urethra, he produced thus artificially a most virulent gonorrhœa, attended with a bladder, and all the usual concomitants. He was six weeks in performing a cure. The case, which is detailed at considerable length in his book, is well worth referring to.

Should we be asked whether we think M. Swediaur, with this artificial affection, was capable of communicating disease to a female by having connexion with her, we would unhesitatingly answer, yes;

just as effectually as if he had originally derived it from venereal intercourse.

We find in books the most prolix descriptions of the various sores observed to proceed from impure coition. The nicest distinctions have from time to time been drawn between the genuine syphilitic and the spurious, and ingenious classifications founded upon their *sui generis* characteristics. An immense deal of talent and industry have been thrown away upon such fabrications. What has been styled the true primary syphilitic ulcer has been delineated with great accuracy by the genius of HUNTER. And yet a late writer, Mr. CARMICHAEL, who has admitted the distinction made by Mr. H. implicitly, with the most ample opportunities afforded him as a chief of a large hospital dedicated to venereal complaints, has not been able with all his observation to find more than two or three legitimate Hunterian chancres in many years. It is therefore useless to comment upon the inutility of such a distinction, particularly since it has been demonstrated over and over, that this kind of ulcer, contrary to the positive assertions of Hunter, Carmichael, and many others of great authority, can, like every other venereal sore, be cured without mercury.*

Upon the whole, the pretended characteristics of venereal affections which have served to edify the credulous faithful, and confuse the student and candid enquirer after facts, may be readily demonstrated to be nothing more than the ordinary effects of irritation and inflammation, modified by circumstances now well understood.

"The ulcer of the teguments of the penis, whatever may have been its origin, seldom bears any resemblance to that of the glans. That of the glans differs ordinarily from that of the prepuce, whilst those of that envelope frequently exhibit great variety of appearance, even at the same time, and in the same patient."

All this variation may be referred to the different degrees of intensity of the irritation or inflammation, and the length of time the

* Notwithstanding, however, the distinctions and classifications adopted by Mr. Carmichael in his treatise upon venereal diseases, the practice which he inculcates, is upon the whole more consonant to reason and the results of recent investigations, than that laid down in any other English book with which we are acquainted.

ulcers may have existed. Their physiognomy is susceptible of great and rapid variation. These are points to which M. Des Brus has invited particular attention, and which he says will be ever confirmed by close observation of the phenomenon which succeed each other during the developement of the ulcers. The original and progressive appearance of these primary affections are thus described by him:—

"They ordinarily proceed," says he, "either from a slight excoriation produced during coitus, from small white or reddish seros vesicles of the size of a millet seed or pin-head, and of an aphthous appearance, or from a minute pustule on the skin. These vesicles break, the fluid which they contain escapes, and sometimes we find the denuded surface exactly like that produced by the application of a blister, whilst at others it is of a milky white. The inflammation progressing, the sore becomes larger and deeper, extends more or less to other parts, and soon presents an aspect varied by circumstances. Sometimes the edges are thin, pale, and level with the surrounding parts; at others on the contrary, they are hard, engorged, and elevated above the sore, particularly after the inflammation has lasted for some time: sometimes the centre appears red and granulated, or pale, fungous, and raised above the margins: sometimes excavated, and of a yellowish colour. In some cases a corrosive matter is secreted. The surface is at times perfectly even, or striated, ragged, and of a stellated appearance. Round or oval upon the prepuce, they are generally irregular upon the glans, elongated upon the frænum, round or oval upon the skin. The irregularity in form generally augments with the progress they make."

After remaining a certain time, the ulcer generally produces a hardness of the part upon which it is situated. This hardness is sometimes like cartilage, and—

"I have often," says he, "seen the base of the prepuce forming a kind of firm and solid ring around the glans. The number of sores varies infinitely: sometimes there is only one, and then again a great many. The chancre of the genital organs is occasionally observed healing on one part, and at the same time attacking another, under every treatment that may be resorted to."

In fact, it cannot we think be denied, that all the appearances designated as the pathognomonics of primary syphilis have occurred, and may occur without the application of a specific virus. Neither is it to be doubted that those have greatly deceived themselves who

have drawn such nice distinctions relative to the infallible characteristics, some of whom have even gone so far as to pronounce their dogmatical opinions upon the bare evidence of the odour exhaled by the pus. The truth is, many practitioners have themselves been the authors of the pathognomonic symptoms, which they have wrongfully charged upon the visionary existence of a *specific virus*, the most simple and harmless sores having been converted by means of improper washes, ointments, escharotics, general treatment, & c. applied according to a certain routine, into irritable, obstinate, frightful, and most mischievous ulcers, which have not only committed ravages upon the tissues where they were first located, but brought other tissues successively into disorder until finally the whole system has been invaded.

The evidence of a venereal virus drawn from the occurrence of buboes, however strong it may seem at first blush, is altogether without weight when candidly investigated. Their presence in fact proves nothing more than that the irritation has extended from the tissues of the penis, either from continuity or sympathy, to the tissue of a neighbouring gland. They originate from similar causes in other parts of the body, most commonly in the axilla from some affection of the superior extremity or breast. The diagnostics, designating this affection as of a genuine syphilitic character, as it is termed, are equally fallacious with those applied for the same purpose to chancre. The labours of Astruc and all his followers in this work, when investigated with attention and candour, will be found vain and delusive.

Like attempts have been made to fix the characteristics of genuine syphilitic gonorrhœa, so that it may be distinguished from the spurious kinds often said to be mistaken for it. But notwithstanding the great ingenuity displayed in the task, every unprejudiced person who will make the investigation for himself, will come to the conclusion that all the phenomena of gonorrhœa depend upon different degrees of urethral inflammation.

"Thus," says M. Des Brus, "in regard to inflammations of all other parts, we constantly observe a difference in the intensity of the pains, in the derangement of the functions, and in the colour and qualities of the excretion."

It is precisely the same case with gonorrhœa, which orginating

from similar causes and sources with the other forms of syphilis is, like them a genuine phlegmasia, curable upon the same general principles. Existing usually without any solution of continuity in the diseased tissue, it frequently gets well of itself, and seldom, comparatively speaking, affects the other tissues of the body to any considerable extent, unless when aggravated by peculiar circumstances. Then indeed its effects are transferred to other parts, and it runs its course after the manner of other venereal forms, attacking the testicles, inguinal glands, the mucous membranes of other parts, the muscles, fasciæ, skin, &c. Who that has frequently been called upon to treat gonorrhœa, has not witnessed sudden transition of the irritation from the urethra to distant parts, the ligaments and joints for example, where it has raged with a violence demanding the use of the most powerful antiphlogistics. In such cases the morbid phenomena scarcely perceptible in the original seat, have as speedily returned to it again whilst the affection of the other parts has ceased. Now, who will contend that the virus in these cases have been translated in the space of a few hours, first to distant parts possessing a very obscure and white circulation, and again in as short a time retreated to its primitive situation.

Such, however, is the force with which early impressions and associations are stamped upon the mind, that it is long before we begin to doubt, and still longer before we come to disbelieve in the existence of things and circumstances relative to which we have formed and long entertained distinct conceptions. It is just so with regard to the venereal virus. All who acknowledge its existence, and the number who do not hold with the hypothesis we are persuaded is at present extremely limited in this country, doubtless think that they have a clear idea and perfect knowledge of what it is. But should any of these set out with candour and something like mathematical scrutiny, in search of the object of their belief, we are greatly mistaken if they would not meet with more difficulty than they might imagine, in demonstrating to the external senses, any substance or matter produced by venereal affections, so distinct in its nature and properties from ordinary animal secretions, as to deserve the appellation of *specific virus*, or bear a fair comparison with what are universally recognized as such, namely, those of small-pox and vaccination.

SELECTED INTELLIGENCE.

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1. *Tannin in Menorrhagia.*—Dr. P. PORTA, after detailing his success in arresting menorrhagia by the administration of tannin, in three-grain pills, repeated every three hours, draws the following conclusions.

1. This medicine acts in a special manner on the uterus, whenever this organ is the seat of an irritation, which gives rise to an active or hypersthenic menorrhagia, and also when this discharge is the consequence of chronic metritis.

2. In menorrhagia, the effect of acute metrisis, the inflammation must be first combatted by copious and repeated bleedings, and then recourse is to be had to the tannin.

3. The action of this medicine is of no avail against uterine hæmorrhages resulting from an organic alteration of the uterus.

4. This agent ought to be preferred to all others in the treatment of menorrhagia, not only on account of the promptitude with which it arrests all the unpleasant symptoms, but because its efficacy is displayed in so small a dose, that the stomach supports it very readily, even though this viscus be irritated, or rendered more irritable by the exhaustion of the patient.—*Archiv. Gen. from the Annali Universali de Medicina, April*, 1827.—*N. A. M. & S. Journal No.* 9.

2. *Cure for Tænia.*—The following remedy for tænia, is recommended in the *Journ. der Prakt. Heilkundie*. ℞. Terebinth, venet. ʒi. Extract. hyoscyam. gr. iv. Calomel. gr. viii., m. ft. massa. Divide into two grain pills, rolled in powder of liquorice root. Of these four are to be taken every three hours; and, during the entire period the patient is to use no nutriment but weak broth, or coffee, or tea. The dose will be increased or diminished, according to circumstances. If the worm be not expelled the first day, the pills may be continued for two or three days. In cases, of rare occurrence, in which the first trial is not successful, the medicine is to be resumed after the lapse of a few days. Instances of the entire success of this prescription in tænia, are furnished by German practitioners.—*Ibid.*

3. *Strictures of the Rectum.*—Mr. C. BELL, in his late lectures at the College of Surgeons, (Lancet, Nos. 205—6.) has divided strictures of the rectum into *four varieties*. The *first*, is the contraction of the

integuments around the anus, similar to that observed around the mouth. The integuments lose their elasticity, become firm, and so thickened, that a probe can hardly be introduced without great suffering. In this variety only, is the *knife* to be employed. The *second* variety is consequent on piles. Distension of the hemorrhoidal vessels produces inflammation, followed by effusion of lymph, loss of elasticity, and contraction. The *third* species, is a scirrhus, taking place at the margin of the inner sphincter, and occasioned by habitual constipation, where a fold of the gut is forced through the sphincter by straining. The *fourth* kind, is a cancerous disease, often confounded with the third variety, beginning in the glandular texture of the part, and resembles the scirrhous contraction of the pharynx. It is aggravated by injudicious interference. Obstruction to the fæces may also arise from "a bagginess within the rectum," and also by a sudden turning or twisting of the rectum, caused by constipation or straining.

Mr. Bell advises regulation of the bowels, so that one copious evacuation be daily procured, especially by glysters: a linseed enema at night is useful, and, in some cases, bougies; but these require great care, as they are very often injurious, aggravating the disease, and giving rise to peritoneal inflammation and *death.*—*Medico-Chirurgical Review, October*, 1827.—*Ibid.*

4. *Nævi Materni.*—Among the novelties of medical practice, we may mention a curious remedy for nævi materni, first employed, we understand, by Mr. Hodgson, of Birmingham, and now in course of trial by some surgeons of London. It is vaccination of the nævus, in several points of its surface, by the specific inflammation of which, it is said, the nævus is arrested in its progress, or caused to slough. We recommend our surgical brethren to try this easy and simple remedy*.

We apprehend, however, that no plan will be equal to that of the ligature. If the tumour be too large for a single ligature to surround, a needle should be passed under the centre of the nævus with a double ligature, and then the two halves surrounded in the usual way. We believe that Mr. Lawrence ties the ligature very tight, and cuts it away at the end of 48 hours, to lessen irritation. A great number of nævi, of various sizes, have been removed in this manner by metropolitan surgeons of late, without a single bad consequence.

An infant, four months old, was admitted, with subcutaneous nævus on the middle of the dorsal spine, an inch in diameter. At birth, it was about the size of a sixpence. When received, the nævus resem-

* It has recently succeeded under Mr. Earle, at Bartholomew's.

bled half a small orange, in size and form. It had a spongy feel, and was reducible by pressure to nearly half its natural size.—Mr. Lawrence passed a needle and double ligature through the base of the tumour, and then separating the threads, drew them round, so as to encompass the whole base. The child cried incessantly during the remainder of the day, and was convulsed in the night. Next day it was fretful, but took the breast towards evening. It was convulsed the second night. 3d day. Some bleeding occurred, but was suppressed by cold applications. 4th day. Child very ill. Mr. L. sliced off two thirds of the tumour, and then applied lint, moistened with cold water. 5th day. The infant much better, and takes the breast. 6th day. The ligatures removed, a poultice applied; and, on the 7th day, the tumour sloughed. The ulcer granulated kindly, and the child left the hospital cured.

The profession was favoured some years ago with a paper from Mr. Wardrop, published in the Medico-Chirurgical Transactions, on the subject of a natural cure which nævi materni sometimes undergo, by a process of spontaneous ulceration. The distinguished surgeon abovementioned imitated this natural process, by applying a strong solution of oxymuriate of mercury to a nævus on a child's back. In this instance, the skin ulcerated rapidly, destroying the substance of the tumour. Two cases are reported from Panton Square, in No. 81 of the Lancet, where a similar practice was adopted.

Case 1. A child, aged 13 months, had a small nævus, the size of a sixpence, on the middle of the frontal region, the central portion of which was of a bright red colour, and to this centre several tortuous vessels ran from the circumference. A piece of adhesive plaster, with a hole in its middle, was applied over the nævus. Through this aperture the kali purum was admitted to the surface. An eschar formed and separated, and subsequent ulceration destroyed the whole of the nævus. The part was cicatrized in three weeks.

Case 2. This was nearly similar, except that the nævus was situated on the cheek. The same treatment was adopted, and the same result ensued.

We lately saw a nævus situated on a child's head, and projecting a couple of lines in height, being about the size of a shilling. By some accident the nævus was irritated—then inflamed, ulcerated, and became destroyed. The child appeared to suffer a good deal during this ulcerative process.—*Lond. Med. Chirurg. Rev.—Phil. Mo. Journ.*

5. *Spina Bifida Cured.*—Mr. Probart, of Hawarden, has communicated a case of spina bifida cured by repeated punctures and discharge of fluid from the tumour. There was a loss of bony substance in the situation of the second lumbar vertebra, and the lower extremities were completely paralytic. When the child was about three months

old, the operations were commenced. After a few puncturings, there came on considerable inflammation in the integuments of the tumour, and the child had some smart convulsive paroxysms. But, by emptying the bowels, and applying leeches to the parts, the inflammation was reduced, and the convulsions ceased. The integuments covering the spina bifida became thickened, and then a plaster and compress were applied with pressure. By these means the tumour was reduced, and ultimately disappeared, leaving a depression in its place.—*Lancet, No.* 186.—*Ibid.*

6. *Cephalo-Spinal Fluid.*—M. Majendie, on the 12th of Feb. 1827, read a Memoir at the Academy of Sciences, Paris, on this fluid, concerning which he comes to the following conclusions:

1. That the cerebro-spinal fluid is one of the natural humours of the body—and, from its situation and use, one of the most important of these humours.

2. That it is indispensable to the free exercise of the cerebral and spinal functions.

3. That it protects the parts which it surrounds and touches from external violence.

4. That it influences the functions of the brain and spinal marrow by the pressure which it exercises on these parts—by its temperature—and by its chemical composition.

5. That at the bottom of the fourth ventricle, opposite the calamus scriptorius, there exists an opening, affording free communication between the cerebral cavities and the spine.

6. That the ventricles are always filled with the fluid under consideration—that these cavities are capable of containing two ounces, without any inconvenience to the intellectual faculties—but that, when the quantity materially exceeds this, there is derangement, and generally paralysis of the muscular movements, with more or less considerable diminution of the intelligence.

7. That it is extremely probable that there is a flux and reflux of the fluid in question from the spine to the ventricles, and from the ventricles to the spine, corresponding with the movements of the brain that take place in the action of respiration.

8. That a fluid accidentally produced in the spinal canal passes readily into the cavities of the brain, and fills those cavities.

9. That a fluid produced in one ventricle passes readily into the others, and from thence passes quickly into the spinal canal.

10. That an accidental fluid, having its source on the surface of the hemispheres, may pass in a short space of time, into the spinal canal, and also into the ventricles of the brain.

11. That it is very probable that the fluid naturally existing in the ventricles, and also that found in certain diseases, have their princi-

pal source in a secretion of the vascular membrane covering the spinal marrow.

We have now only to add that, on chemical analysis, the cephalo-spinal fluid was found to consist of 98 parts in the hundred of water, the other two parts being composed of osmazome, albumen, chloride of soda, subcarbonate of soda, and a very minute trace of phosphate and carbonate of lime.

The most interesting part of this investigation will be that which relates to the passage of a morbid, or morbidly increased quantity of fluid from the spinal canal to the ventricles of the brain, in certain diseases; for, if this be ascertained, it will greatly influence our modes of treatment, and probably throw some light on points of pathology now involved in much obscurity.—*Med. Chirurg. Rev.—Ibid.*

7. *On the Gastric Juice.*—"The *Gastric Juice*, which has been made so frequently the subject of inquiry, and with such discordant results, has been examined anew, both by Leuret and Lassaigne, and by Tiedemann and Gmelin; and our information as to its properties and agency in digestion has in consequence been rendered much more precise. Under this head the most extensive and valuable researches unquestionably appear to be those of Tiedemann and Gmelin.

"MM. Leuret and Lassaigne allege they have invariably found the gastric juice to be acid; they state its component parts to be water, hydrochlorate of ammonia, chloride of sodium, mucus, an animal principle soluble in water, phosphate of lime, *lactic* acid; and they impugn the accuracy of the experiments of Dr. Prout, who, it is well known, was lately led to infer that the free acid evolved during digestion is the hydrochloric.

"The Heidelberg physiologists, on the contrary, inform us, that if the contents of the stomach be examined after a long fast, and without any stimulus being applied to its villous membrane, the fluid found in it is a clear, ropy, faintly-opaque liquid, which is almost or entirely destitute of acidity. But if any stimulus, even of the simplest kind, is applied to the inside of the stomach, then the fluid secreted is uniformly acid, and the degree of acidity appears to be proportional to the degree of the stimulus. Pure gastric juice they found to be best procured by making animals swallow quartz pebbles after a long fast, and killing them in an hour. It was generally grayish white, ropy, and decidedly acid. It contained, as procured from the dog and the horse, some mucus, osmazome, and salivary matter, alkaline sulphates and hydrochlorates, the alkali being chiefly soda, phosphate and muriate of lime, other salts in minute proportion; and the acidity was owing to the *hydrochloric and acetic acids* in the dog, and to these conjoined with the *butyric acid* in the horse. That part of their chemical inquiries which regards the free acids seems to have been

conducted with great care; and certain criticisms of Leuret and Lassaigne have given occasion to an appendix, consisting of a defence of themselves, and of Dr. Prout, which we cannot help thinking is quite satisfactory. As the lactic acid of Leuret and Lassaigne is now acknowledged by Berzelius to be a variety of the acetic, all parties may be understood to be agreed as to the existence of that acid in the gastric juice. The researches of Prout, Children, and Graves, confirmed as they have been so amply by Tiedemann and Gmelin, likewise establish the presence of the hydrochloric acid.—The existence of the butyric is more doubtful.

"When the secretion of the gastric juice is elicited by its natural stimulus, food of various kinds, it has been remarked by Leuret and Lassaigne, as well as by Tiedemann and Gmelin, that the chymous mass is invariably acid, and that its ascidity is owing to the acids mentioned above; and Tiedemann and Gmelin farther maintain as the result of their experiments, that its ascidity is greatest when the food is most difficult of digestion. In dogs and cats the greatest ascidity was remarked when they were fed with coagulated albumen, fibrin, bones, gristle; it was less when they were fed on starch, gelatin, potatoes, rice; and when they were fed with liquid albumen, the alkalinity of the food was nearly sufficient to neutralize the acidity of the gastric juice. The quantity secreted during digestion seems to be very great; Leuret and Lassaigne having found, that when the gullet of a horse was tied so as to prevent the secretions of the mouth and gullet from entering the stomach, a full meal of oats became completely saturated with juice in four or five hours.

"So much with regard to the nature and composition of this fluid. Its power of dissolving the food has likewise been made the subject of experiment by the Parisian and by the Heidelberg physiologists; and they agree in confirming the statements of Spallanzani, Stevens, Grosse, and others, and in contradicting the later results of Montegre, who imagined he found that the gastric juice does not act out of the body, and whose opinion has since regulated that of the French school generally. MM. Leuret and Lassaigne remarked that the fluid procured by long sponges from the stomach of a duck while fasting, when kept upon bread crumbs at a temperature of 88 degrees Fahr. soon divided them into minute particles, and formed with them a homogeneous mass precisely like chyme; and that when flesh was mixed with the gastric juice of the dog, it was quickly softened and lost weight. The observations of Tiedemann and Gmelin are more detailed. The fluid found in the stomach of the dog during the digestion of bones and coagulated albumen was made the subject of experiment, and comparative observations were made with water and with milk. Various kinds of food were tried, such as bread, coagulated albumen, raw

flesh, boiled flesh; and in every instance it was observed that the bread was broken down in the course of eight or ten hours into a pap, and the surface of the beef and of the albumen was converted into a pulp, which could be easily scraped off. It is evident that Montegre failed in procuring similar results, because the fluid with which he operated was not gastric juice, secreted in consequence of the application of some stimulus to the stomach, but a mixture of saliva, the mucus of the gullet, and the fluid which Tiedemann and Gmelin found in the stomach while empty of food and not stimulated.

"The solvent power of the gastric juice, therefore, is now placed beyond all question. It is only the German experimentalists who have thought of trying whether this property is accounted for by the composition of the fluid; and of attempting to accomplish, by means of the simple substances contained in the gastric juice, the same solution or digestion which is effected by the gastric juice itself. Their experiments, however, are not complete. They have remarked, that dilute acetic acid, dilute hydrochloric acid, a weak solution of acetate of ammonia, and a solution of hydrochlorate of ammonia, severally dissolve more or less of most animal substances which are used as articles of food. They have not tried their effects conjunctly, as they exist in the gastric juice.

"Although these experiments, however, are not satisfactory, no doubt can exist that the gastric juice possesses the power, as a mere chemical agent, of effecting the solution of a great variety of kinds of food. Whether this chemical property is, with the aid of the churning action of the stomach, sufficient for effecting the process of chymification, remains now to be considered. The mucous crypts of the stomach evidently pour out an abundant mucus; but it is probable this only serves for lubricating the stomach and food, and perhaps for diluting it. It is impossible, indeed, to collect the mucus of the stomach, so as to ascertain whether or not it possesses also the power of dissolving vegetable and animal matter: but this certainly appears improbable. The bile has no share, as has been imagined by some physiologists, in converting the food into chyme. According to the late experiments of Brodie and Mayo, and those presently to be mentioned of Leuret and Lassaigne, and of Tiedemann and Gmelin, chymification goes on perfectly in animals fed after the biliary duct has been tied. There is no other apparent agent, therefore, in the process, except the gastric juice and the muscular action of the stomach. It appears to us, however, that the question should have been set at rest by subjecting the food during artificial digestion to a process of churning, equivalent to that to which it is subjected by the stomach, and then comparing the chemical changes which take place with those produced on the principles contained in the food after they have

been subjected to natural chymification."—*Ed. Med. and Surg. Journ. October*, 1827.—*Am. Journ. Med. Sciences.*

8. *Rare Insects.*—There exists in Livonia, a very rare insect, which is not met with in more northern countries, and whose existence was for a long time considered doubtful. It is the *Furia Infernalis*, described by Linneus in the *novcaux memoires del'Academie d'Upsal*, in Sweden.

This insect is so small that it is very difficult to distinguish it by the naked eye. In warm weather it descends from the atmosphere upon the inhabitants, and its sting produces a swelling, which unless a proper remedy is applied, proves mortal.

During the hay harvest, other insects named *meggar*, occasion great injury both to men and beasts. They are of the size of a grain of sand. At sunset they appear in great numbers, descend in a perpendicular line, pierce the strongest linen, and cause an itching and pustules, which if scratched, become dangerous. Cattle, which breathe these insects, are attacked with swellings in the throat, which destroy them unless promptly relieved. They are cured by a fumigation from flax, which occasions a violent cough.

Rev. Ency. Suillet, 1827.—*Silliman's Journal.*

9. *Adulteration of Sulphat of Quinine by Sugar, by* M. Winkler. The author having received some sulphat of quinine mixed with sugar, invites the attention of physicians and pharmacopolists to this new species of fraud, and proposes the following method of detecting it. Dissolve the salt in water, and precipitate the quinine by carbonate of potash.

Filter the liquid and evaporate to dryness; the residue being treated with alcohol, the latter dissolves the sugar and leaves the sulphat of potash and the excess of carbonate untouched: on evaporating the alcohol the sugar is obtained quite pure.

Bull Univ. Fer. 1828.—*Ibid.*

ORIGINAL INTELLIGENCE AND NOTICES.

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1. Laryngotomy.

Dr. Richey, of this state, in connexion with Drs. Dunlavy and Rigdon, of Hamilton Ohio, lately performed this operation upon a little boy, aet. three years; who had received into the trachea, twenty four hours previous, a grain of corn. Emetics, and other means were had, for its dislodgement and expulsion, without effect, previous to the operation, which was performed in the usual way, between the thyroid and cricoid cartilages.

Though the immediate object, of the operation, that of removing the foreign body, was not attained, still the ultimate design, of preservring the child, was accomplished, by its being allowed to breath through the artificial aperture, for several days; when, during a violent fit of coughing, the kernel of corn was discharged. The child recovered, perfectly, in less than a month.

The enterprise of our young Ohio Surgeons is truly commendable. Many of the most capital operations have been performed in this state, within the last four or five years, and most of them successful ly. W.

Public Lectures.

The summer sessions, of Medical Lectures in Transylvania University, will commence on Monday the 9th of Jun. and end on the 30th of the following August.

Pro. Thomas J. Mathews, proposes to deliver a course of Lectures on Natural Philosophy in Transylvania University, commencing on the 9th of June next.

Dr. Locke, Principal of the Cincinnati Female Academy, will commence a course of Botanical Lectures on the 1st of March; to be continued once and twice a week through the spring and summer months. W.